

Check list

Official Publication of the
**MEDICAL AND CHIRURGICAL FACULTY
OF THE STATE OF MARYLAND**

DUPLICATE

✓ THE UNIVERSITY
OF MICHIGAN

FEB 25 1959

MEDICAL
LIBRARY



Maryland

STATE MEDICAL JOURNAL

JAN 28 1959

VOL. 8 NO. 1
JANUARY, 1959

*assures
a more
decisive
response*

new

ILOSONE™

*in almost
every common
bacterial
infection*

Ilosone™ (erythromycin ester, Lilly)—as the propionate

Ilosone provides the speed, potency, and certainty of parenteral antibiotic therapy plus unsurpassed safety and the ease of oral administration. Usual dosage for adults is one or two 250-mg. Pulvules® every six hours, according to severity of infection. For optimum effect, administer on an empty stomach. Supplied: Pulvules of 250 mg., and 125 mg. for pediatric use.

**Parenteral Performance
in Every Pulvule**

ELI LILLY AND COMPANY
INDIANAPOLIS 6, INDIANA, U. S. A.



932518

ANNUAL MEETING—WEDNESDAY, THURSDAY, FRIDAY, APRIL 15, 16, 17, 1959



therapeutic sulfa  levels

Midicel

(sulfamethoxypyridazine, Parke-Davis)

Maryland

STATE MEDICAL JOURNAL

Medical and Chirurgical Faculty of the State of Maryland

VOLUME 8

January, 1959

NUMBER 1

EDITORIAL

ACCEPTANCES

LESLIE E. DAUGHERTY, M.D.

There are certain things in life that are accepted. No one questions them until they are lost or taken away; such things as freedom of speech, power of assembly, the right to own property, and a public school education.

Higher education must be strived for; it's not conferred. Neither are good manners, loyalty, honesty, integrity or social consciousness.

An off-key voice, loud talking, profanity, risqué stories, whispered chitchat and silence when an adversary or envied character comes upon the scene are all evidences of the inner self.

Whether to wear or not to wear rubber gloves at times brings forth the statement, "They dull my sensitivity."

When using a modern dictating machine some say, "Longhand better expresses my thoughts."

When asked to read a good book the answer frequently is, "I have not time," or to write an article for a medical journal, "I haven't any interesting cases."

Progressiveness is accepted, but reaction is also accepted. Greed, avarice, love for power; all rise up at times to thwart progress.

Standards are built up only to be torn down and to satisfy the greed, envy and hatred of certain individuals.

Kipling expressed the secret:

*"If you can force your heart and nerve and sinew
To serve your turn long after they are gone,
And so hold on when there is nothing in you
Except the Will which says to them, 'Hold on.'"*

Some individuals have vision. Some create the circumstance. Some interpret the results. All cannot be everything. To create is to mold. To mold is to change and to change is bound to modify or abolish another's creation.

The deed is the thing, not the individual.

No class of men need "friction" so much as physicians. The daily round of the busy practitioner tends to develop an egoism of a most intense kind to which there is no antidote. The few setbacks are forgotten. The mistakes are often buried and ten years of successful work makes one dogmatic, intolerant of correction and abominably self-centered. To this mental attitude the late Sir William Osler said, "A man misses a good part of his education who does not get knocked about a bit by his colleagues in discussions and criticisms."

7 Washington Street
Cumberland, Maryland

Scientific Papers

CHOLESTEROL CHARACTERISTICS*

CAROLINE BEDELL THOMAS, M.D.

Today we are becoming increasingly aware of cholesterol and its relationship to early coronary disease. Scientific and not-so-scientific journals, advertisers and even the patients themselves all talk about it, but the meaning of a single cholesterol blood level in a given patient is yet far from clear. Some of the questions which constantly arise include:

1. What is meant by a high cholesterol level?
2. Is it true that high cholesterol levels may lead to early atherosclerosis, particularly coronary occlusion?
3. Is there anything in the idea of familial predisposition to hypercholesteremia and coronary disease?
4. Does eating the traditional American diet with liberal amounts of butter, mayonnaise, oleo-margarine, peanut butter and the like actually increase the risk of coronary occlusion?
5. Should efforts be made, by diets or drugs, to bring down the blood cholesterol in patients whose levels seem too high?

This morning, I shall try to answer only the first three of these questions. I shall not describe current geographical and experimental dietary studies concerning which you will read more every week, partly for lack of time and partly because the results of these studies are somewhat conflicting. A good review of the whole problem of atherosclerosis and dietary fat appeared in the August, 1957, issue of *Circulation*, and has been distributed by the American Heart Association. Likewise, I shall not attempt to evaluate various pharmacological substances reported to lower cholesterol levels with varying—and usually indifferent—success. Instead, I intend to discuss some of the things which you as physicians should know about cholesterol in order to understand and interpret the blood cholesterol levels reported to you on your own patients.

* Presented at the One Hundred and Sixtieth Annual Meeting of the Medical and Chirurgical Faculty of the State of Maryland on Thursday, April 17, 1958, in Osler Hall, 1211 Cathedral Street, Baltimore 1, Maryland.

First, there is general agreement that the total serum cholesterol of healthy adults has a wide range of normal values. For example, when we examined the frequency distribution of cholesterol levels among 612 medical students by the Buell modification of the Bloor method, the range was from 108 to 407 mg. per 100 cc. with a mean value of 229 mg. per 100 cc. (1). There was some skewing of the distribution curve in the direction of higher values.

Secondly, the exact numerical value of cholesterol is the function of the particular laboratory technique employed and should be judged in that framework. Over the last twenty years the Bloor method and the Schoenheimer-Sperry method have been the two most commonly used. The Bloor method produces values around 25 or 50 mgs. per 100 cc. higher than the Schoenheimer-Sperry method. In 1952 the Abell method, with values similar to those of the Bloor method, was described and was the method finally adopted for the cholesterol studies in the Cooperative Study of Lipoproteins and Atherosclerosis (2). There are many other chemical methods in use today which are less highly regarded from the standpoint of technical reproducibility.

When we studied the reproducibility of our results by sending blind duplicate samples from each vena puncture to the Johns Hopkins Clinical Chemistry Laboratory, we found that the technical error of measurement (s_e) was 10.7 mg. per 100 cc. in 148 such duplicate tests (1). This means that a cholesterol value as reported from our particular chemistry laboratory is less than ± 11 mg. per 100 cc. from the true value two-thirds of the time. Table I indicates that our technical error compares favorably with that of four other laboratories using two other methods. These laboratories were all participants in the Cooperative Study previously mentioned and were all measuring samples of the same pooled serum. The smallest technical error was reported by Page's Cleveland Clinic Laboratory, using the Abell method; their technical error was less than ours. However, it may be noted that the three laboratories

TABLE I
Estimates of the Technical Error of Measurement
for Duplicate Cholesterol Determinations

Investigators	Method	Technical Error (Se)
Johns Hopkins Series 1955 Series 1956	Bloor	Mg. per 100 cc.
		11.2
Chandler, Lawry, Potee and Mann	Abell	14.5
Cooperative study of lipoproteins and atherosclerosis:		
Cleveland Clinic (Page)	Abell	7.6
Harvard (Stare and Mann)	Abell	10.5
Donner Laboratory (Gofman)	Coleman	17.3

(From Thomas, C. B.: J. Chr. Dis. 6: 1, 1957. By permission of The C. V. Mosby Co.)

using the Abell method showed marked differences in the technical error of measurement from laboratory to laboratory. The technical error of the Harvard Laboratory was much like ours while that of Chandler, Lowry, Potee and Mann was greater, and twice as large as that of Page. Other methods such as the Coleman method were found to show even larger technical errors.

Using these varying methods, the mean cholesterol for the pooled serum came out very differently (Table II). By the Abell method, the mean was 263 mg. per 100 cc. and by the Schoenheimer-Sperry method 219 mg. per 100 cc.; again the technical error of measurement differed widely from laboratory to laboratory. This was the Cooperative Study's preliminary reproducibility study using duplicate tests. Later, by eliminating other methods and using the Abell method only, the cooperating laboratories

TABLE II
First Reproducibility Study
18 Specimens Measured in Duplicate by Each Laboratory

Laboratory	Total Cholesterol (Mg./100 cc.)		
	Mean	Se	Method
Cleveland	263	24.6	Abell
Donner	229	13.8	Coleman
Harvard	200	20.3	Hemolytic
Pittsburgh	250	7.7	Hemolytic
Framingham	219	10.7	Schoenheimer and Sperry

(From Cooperative Study on Lipoproteins and Atherosclerosis, Circulation 14: 691, 1956, adapted from Table 2. By permission of Grune and Stratton.)

became more consistent. These findings indicate that if such excellent laboratories as these have technical difficulties, it is most important for each physician to familiarize himself thoroughly with exactly how his own laboratory scores before he can really conclude much about the cholesterol levels reported on his patients.

A third fact generally acknowledged is that there is little or no difference in the cholesterol level after eating as compared with that in the fasting state. In 1935 Boyd, using the Schoenheimer-Sperry method, studied the cholesterol levels of eight normal subjects over 24 hours and found the following mean levels:

Time of vena puncture	8 A.M.	11 A.M.	2 P.M.	5 P.M.	8 P.M.	12 P.M.	4 A.M.
Mean cholesterol in mg. per 100 cc.	177	178	174	175	177	171	183
Meals (2000-2500 calorie diet)	Breakfast at 8 A.M.	Lunch at 12 N.	Supper at 5:30 P.M.				

He concluded that concentration of plasma cholesterol is not consistently or markedly affected by such factors as time of day, intake of ordinary meals and sleep (3). In 1956, a similar study by Keys and his associates confirmed that view (4).

The fourth and fifth important factors are age and sex, which have quite a bearing on the level of cholesterol. As age advances the level of cholesterol gradually rises until middle life in healthy men and after middle life in healthy women. Our studies on 556 male medical students showed a mean rise of 2.8 mg. per 100 cc. per year of age, so that at age 20 the mean level was 218 mg. per 100 cc. compared with 247 mg. per 100 cc. at age 30 (1). Keys found a rise of 2.3 mg. per 100 cc. per year of age in men between the ages of 17-45. Adlersberg, working with men of similar ages to ours, reported a rise of 3.6 mg. per 100 cc. per year of age. Accordingly, when considering the cholesterol levels of younger men, one should allow for an increment of about 3 mg. per 100 cc. per year of age up to the age of 45. Figure 1A shows the frequency distribution curve of cholesterol levels in men at age 25 to 29 and at age 55 to 59 as determined by the Cooperative Study (5). At the older age, the whole curve has shifted somewhat in the direction of higher values. This does not necessarily mean that every individual has higher levels, how-

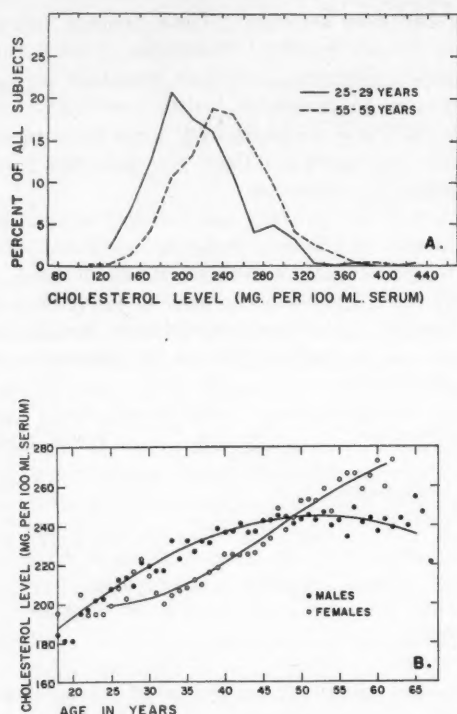


FIG. 1.

A. Distribution of Two Age Groups of Men According to Cholesterol Level.

B. Mean Cholesterol Level by Age and Sex.

(From Cooperative Study of Lipoproteins and Atherosclerosis, *Circulation* 16: 227, 1957 Figs. 7 and 9. Reprinted by permission of Grune and Stratton.)

ever. Follow-up studies over periods of years have shown that some individuals show a fall or no change in cholesterol levels, but enough people show a rise to pull up the mean value little by little (1). The rise of cholesterol with age in women as compared with men is shown in Figure 1B. In the early and middle twenties the mean values are about the same; then the men's cholesterol levels begin to spurt up. Women's cholesterol levels do not change much until the forties, when the curve rises so sharply that at the age of 49, women's cholesterol levels actually become higher than men's for a while. The studies of Keys and others have shown that in men, the cholesterol level falls rapidly in the seventies and eighties (6). Whether this is because the people with the higher cholesterol levels had already died at those ages or because the cholesterol in the individual falls is not yet known.

A sixth point is that despite measurable fluctuation there is relative constancy of cholesterol levels over a period of weeks or months in a normal individual. Figure 2A shows the levels of a medical student, age 23, who had 16 duplicate tests in a period of 16 weeks. Each dot represents the mean of two tests on the same serum sample. His first eight tests were on a biweekly basis, while the later samples were obtained every one or two weeks. As you see, during the four week control period he had a mean level of 190 mg. per 100 cc. with a very narrow range; he was a very stable individual. Figure 2B shows the chart of another medical student in the same class. He was the same age, 23, as the first subject,

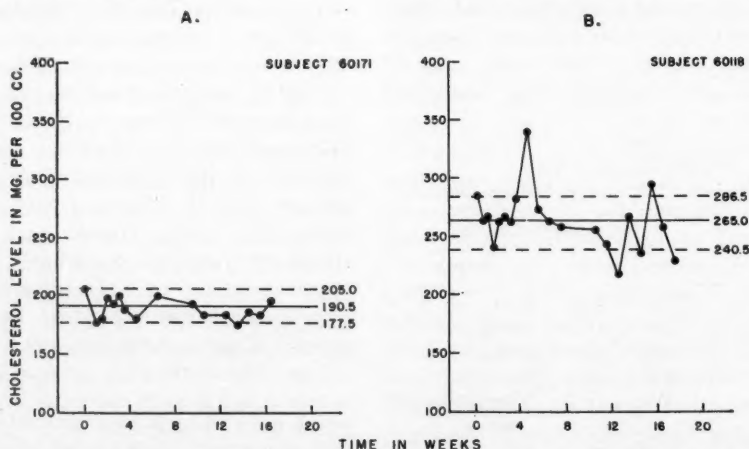


FIG. 2A and B. Contrasting patterns of cholesterol level and variability. Both subjects were healthy male medical students of 23 years. Each dot represents the mean of two determinations from the same serum sample. The solid line indicates the mean and the broken lines the range for the first eight determinations, performed at bi-weekly intervals.

but was fatter and more mesomorphic. His mean control level was 265 mg. per 100 cc. and the cholesterol fluctuations were very much wider, going up to 340 and down to 218 mg. per 100 cc. without obvious cause. When we compared the cholesterol levels of a small group of house officers with their own levels as students four to seven years before, more cholesterol had come down than gone up, suggesting that such biological variables as nervous tension, changing eating habits or changing endocrine patterns may be of more importance than aging (1, 7).

TABLE III
*Cholesterol Levels in Men with Coronary Artery Disease
Compared with a Control Group Matched As to Age*

Age in Decades	No.	Mean Age	Cholesterol in Mg. per 100 cc.			
			Coronary Group		Control Group	
			Mean	S.D.	Mean	S.D.
30-39	12	36	278	±64	174	±22
40-49	36	45	243	±60	180	±33
50-59	52	54	224	±59	168	±30
60-69	37	64	223	±57	166	±42
70+	12	75	214	±66	171	±34

(Oliver and Boyd, B. Ht. J. 15: 387, 1953 adapted from Table I. By permission of Brit. Ht. Journal.)

A seventh point has to do with the cholesterol of patients with coronary disease. It has been shown that these patients have higher mean cholesterol levels and that their levels fluctuate more widely than those of healthy persons of similar age. Data from the excellent study of Oliver and Boyd comparing the cholesterol levels of patients with and without coronary disease is shown in Table III. Two hundred patients entering the hospital were matched exactly as to age and number by patients convalescing from non-serious diseases, and at every age the mean cholesterol level of the coronary patient was much higher than those of the non-coronary control group (8). Also a good deal more variability in level was encountered. Quite a few other studies have brought out the same point.

Since high cholesterol levels *accompany* coronary artery disease, the question of whether it *precedes* the appearance of clinical disease becomes of immediate importance. It is known that there are persons in apparent good health with excessively high levels, or hypercholesteremia.¹ We are particularly inter-

¹ We define hypercholesteremia as a cholesterol level of 300 mg. per 100 cc. or above.

ested in studying its occurrence in young people as a possible precursor of coronary artery disease. Nearly nine per cent of our medical students were found to have hypercholesteremic levels at some time during their four years in medical school (7).

Age of student.....	19-22	23-26	27-30	31-34
Number.....	291	241	55	22
Per cent with hypercholesteremia.....	3	6	9	27

Thirty-two per cent of the medical students with hypercholesteremia had a parent with coronary heart disease compared with twelve per cent of the students with normal cholesterol values. In other words, the prevalence of parental coronary disease, chiefly involving fathers, was almost three times as great when the subject's cholesterol values were excessive as when they were not. This was a significant statistical difference. Another intriguing finding which we made last year is the fact that students with *higher* cholesterol levels are more likely to be smokers than students with *lower* levels (9). We are making additional studies to determine, if possible, whether or not this represents an inherited or constitutional difference rather than being due to the influence of smoking on cholesterol level.

In summary, it appears that high cholesterol levels and coronary occlusion are closely associated and tend to run in families. In order for a physician to decide whether his patient's cholesterol is high or not, he must take into account the range and accuracy of the determinations in the laboratory where the blood serum samples are analyzed, the chemical method used, and the age and sex of the patient. Several determinations over a period of weeks are much better than one and may give important information as to spontaneous variation. Before attempting to lower cholesterol levels by any method whatsoever, from four to eight determinations should be carried out, preferably in duplicate, so that the extent of the cholesterol lowering effect can be accurately measured.

This study was supported in part by the National Heart Institute, Research Grant H-1891, in part by Research Contract V1001 M-2768, Veterans Administration, and in part by the Tobacco Industry Research Committee.

*The Johns Hopkins University
School of Medicine
Baltimore 5, Maryland*

REFERENCES

1. THOMAS, C. B. AND EISENBERG, F. F.: Observations on the Variability of Total Serum Cholesterol in Johns Hopkins Medical Students, *J. Chr. Dis.* **6**: 1, 1957.
2. The Technical Group of the Committee on Lipoproteins and Atherosclerosis, and the Committee on Lipoproteins and Atherosclerosis of the National Advisory Heart Council. Evaluation of Serum Lipoprotein and Cholesterol Measurements as Predictors of Clinical Complications of Atherosclerosis. Report of a Cooperative Study of Lipoproteins and Atherosclerosis, *Circulation* **14**: 691, 1956.
3. BOYD, E. M.: Diurnal Variations in Plasma Lipids, *J. Biol. Chem.* **110**: 61, 1935.
4. KEYS, A., ANDERSON, J. T., AND MICKELSEN, O.: Serum Cholesterol in Men in Basal and Nonbasal States, *Science* **123**: 29, 1956.
5. LEWIS, LENA A., OLMSTED, F., PAGE, I. H., LAWRY, E. Y., MANN, G. V., STARE, F. J., HANIG, M., LAUFFER, M. A., GORDON, T. AND MOORE, F. E.: Serum Lipid Levels in Normal Persons: Findings of a Cooperative Study of Lipoproteins and Atherosclerosis, *Circulation* **16**: 227, 1957.
6. KEYS, A.: The Age Trend of Serum Concentrations of Cholesterol and of S_{10-20} ("G") Substances in Adults, *J. of Gerontology* **7**: 201, 1952.
7. THOMAS, C. B.: Observations on Some Possible Precursors of Essential Hypertension and Coronary Artery Disease: V. Hypercholesteremia in Healthy Young Adults, *Am. J. of Med. Sci.* **232**: 389, 1956.
8. OLIVER, M. F. AND BOYD, G. S.: The Plasma Lipids in Coronary Artery Disease, *Brit. Heart J.* **15**: 387, 1953.
9. THOMAS, C. B.: Familial and Epidemiologic Aspects of Coronary Disease and Hypertension, *J. Chr. Dis.* **7**: 198, 1958.

REDUCTION OF SERUM CHOLESTEROL IN HYPER-CHOLESTEREMIC PATIENTS: EFFECT OF A POLY-SORBATE 80-CHOLINE-INOSITOL COMPLEX

HARVEY L. FULLER, M.D.

During the past decade or so increasing interest has been shown and greater efforts have been directed in the field of experimental atherosclerosis. When one reads through the profusion of literature that now exists on this subject, one important fact is noted; to render the experimental animal atherosclerotic the force feeding of cholesterol, either alone or in conjunction with other experimental techniques, has been and must be employed.

While there is still considerable controversy as to the etiologies of atherosclerosis, it seems to be fairly well established that an important relationship between atherogenesis and the concentration of cholesterol in blood in experimental animals exists.

Kellner's (1) demonstration of the importance of the physico-chemical state of the serum lipid emulsion in the pathogenesis of atherosclerosis in rabbits affirmed the thinking of many that the existing inborn error is manifest by a probable instability of cholesterol in the serum emulsion.

One must always bear in mind, however, that all existing evidence as to the possible association between cholesterol and the development of atherosclerosis is the result of animal experimentation. As to the ever-present question of the similarity of experimental atherosclerosis in animals to that of

man, many investigators feel that only studies in humans will shed light on this possible relationship.

The clinical manifestation of atherosclerosis of prime concern to the internist is coronary artery disease. While it would be rash to believe that abnormal serum lipids are the sole causative factor in the development of arteriosclerosis and coronary disease, nevertheless, the voluminous data now available indicate a rather close relationship. Gofman and co-workers (2) in 1950 reported their findings that there existed a statistical correlation between a low density class of lipoproteins and the presence of arteriosclerosis in human subjects. Jones, et al. (3), from the same laboratory, reported an increase in both serum cholesterol and beta lipoprotein levels with age, and a positive correlation of analytic serum cholesterol measurement with coronary artery disease.

While some controversy still exists with regard to the predictive value of elevated serum lipoproteins or cholesterol, nevertheless, the joint report of The Technical Group of the Committee on Lipoproteins and Atherosclerosis of the National Advisory Heart Council (4) clearly demonstrates that the elevation of blood lipids, total cholesterol, and beta lipoproteins precedes clinical coronary disease

rather than being a metabolic result of coronary disease.

Lawry, et al. (5), have recently reported the findings of their extensive three-year investigation during which the serum lipids of 2,405 human subjects were studied. Of this group, 273 men with established myocardial infarction were found to have both serum cholesterol and lipoprotein levels which were higher, on the average, than those found in age-matched men without obvious disease. The authors conclude that this data supports the belief that clinical manifestations of atherosclerosis are associated with a disorder of lipid metabolism, though the difference is less than reported by others. While neither S_t 12-20 nor S_t 20-100 nor cholesterol showed any clear individual superiority as prognosticators of coronary artery disease, the measurement of total serum cholesterol remains the most practicable laboratory measurement for aiding in the identification of individuals with gross disturbances of lipid metabolism which predispose to coronary artery disease.

As stated previously, the development of arteriosclerosis would seem to depend on several factors: histo-pathologic changes occurring in the arterial wall, an inborn metabolic error involving cholesterol transport and utilization, stress, and hypertension. Major emphasis has been placed on the systemic factors, since objective measurement (serum cholesterol and lipoprotein determinations) can be applied. It has been the hope that controlling the aberrant lipid patterns might prevent the accumulation and deposition of lipids on the atherosclerotic plaque.

A review of the literature on this subject reveals that a number of agents have been studied and proposed for the control of hypercholesteremia. Among these are lecithin, lipotropic agents, estrogenic substances, vitamin B factors, pyridoxine and nicotinic acid, plant sterols, beta-sitosterol, vitamin E and wheat germ oil, polysorbate 80 complex and unsaturated fatty acids.

PLAN OF STUDY

While it is not the purpose of this paper to discuss the many factors that may influence the development of atherosclerosis, it is worthwhile to mention some which are of importance. These would include stress, hypertension, diabetes mellitus, nephrosis, hormonal factors, diet, familial and essential hypercholesterolemia.

In this investigation, we have confined ourselves

to the study of hypercholesteremia and to its management. Since both animal experiments and human studies strongly indicate a relationship between dietary fats and cholesterol and the incidence of hypercholesteremia, as clinicians we have been advocating dietary restrictions for patients with hypercholesteremia. Heroic dietary control with emphasis on low fat, low cholesterol and high protein intake has been shown to produce a favorable effect upon the level of blood cholesterol. More recently, Ahrens, et al. (6), by means of a formula diet high in vegetable fat and unsaturated fatty acids, have demonstrated that serum lipid levels can be influenced by dietary manipulation. These findings were in accord with the earlier results of Kinsell (7) and Beveridge (8). However, it has been pointed out by many investigators that it is extremely difficult to maintain patients for any significant time on a drastically restricted diet.

Our own experiences in such patients proved similarly frustrating. Either the patients refused to cooperate after two to four weeks or, in those cases who adhered to the modified diet regimen (1000-1800 calories), no appreciable change occurred. It must be mentioned here that the dietary fats permitted were mostly of vegetable origin, containing unsaturated fatty acids. The 1000 calorie diet contained approximately 120 grams of carbohydrate, 75 grams of protein, and 45 grams of fat; the 1800 calorie diet—200 grams of carbohydrate, 90 grams of protein, and 75 grams of fat.

Following the reports of several investigators (9, 10) that hypercholesteremia can be favorably influenced by therapy directed toward the stabilization of the physico-chemical state of the serum lipids, we undertook the study of a polysorbate 80 complex in the management of hypercholesteremic patients.

MATERIAL AND METHODS

Patients were chosen from private clinical practices, general hospital out-patient departments, and chronic geriatric institutions. The subjects were known either to be obese or to have cardiovascular and peripheral vascular disease, diabetes, hypothyroidism (idiopathic or postoperative myxedema). Serum cholesterol levels were determined in these patients by the method of Pearson, Stern and McGavack (11). Of the 200 patients screened, 41 had serum cholesterol levels over 300 mg. per 100 ml., and these were retained for the purposes of this

study. The following table shows the established diagnoses in this group of patients.

	Number of Patients
Cardiovascular and peripheral vascular disease.....	9
Diabetes mellitus.....	14
Hypothyroidism.....	8
Essential hypercholesteremia xanthomatosis.....	2
Essential hypercholesteremia and obesity.....	3
Familial hypercholesteremia (without obesity) (in 2 families).....	5
Total.....	41

The cholesterol values ranged from 300 to 1460 mg. per 100 ml. Seventeen (41 per cent) were female and 24 (59 per cent) were males. Their ages ranged from 33 to 66 years. The diabetics included in the study were well controlled and their diet was deliberately unchanged while they were under observation. The hypothyroid patients maintained an euthyroid state with adequate doses of thyroid hormone. The patients with cardiovascular disease were all in fairly good states of health, without evidences of congestive failure or histories of previous thromboembolic phenomena or vascular accidents.

In each instance rigid dietary restrictions had failed to induce significant reduction of serum cholesterol levels. The cases of exogenous obesity had already been placed on a low calorie, low fat diet without adjunctive therapy. The patients with peripheral vascular disease were on low cholesterol diets and were taking peripheral vasodilator drugs; two of these had undergone sympathectomy and one had had an amputation.

After determining the fasting serum cholesterol levels on two separate occasions, a week apart, treatment with polysorbate 80-choline-inositol complex¹ was begun. The mixture was administered in doses of 10 cc. twice daily, and in some cases, it became necessary to increase the intake to 40 cc., or even as much as 60 cc. in twenty-four hours.

RESULTS

Figures 1, 2, 3, and 4, and Tables 1, 2, 3, and 4 show the responses to four weeks of continuous therapy among patients grouped according to diagnosis. It can be seen that the drop in cholesterol level was observed within 21 days after onset of therapy.

¹The complex, consisting of polysorbate 80, 500 mg.; choline dihydrogen citrate, 500 mg.; and inositol, 250 mg. per 5 cc., was supplied by Ives-Cameron Company and is known as Monichol®.

TABLE 1
Total Serum Cholesterol Levels (mg.%) of Diabetic Patients with Hypercholesteremia Treated with Polysorbate 80-Choline-Inositol Complex (Four Weeks of Therapy)

Patient	Age	Sex	Pre-Treatment		Treatment			
			2 weeks	1 week	1 week	2 weeks	3 weeks	4 weeks
J.L.	46	M	331	323	301	238	196	207
J.C.	34	F	348	356	350	302	184	177
S.H.	66	F	320	316	309	264	224	200
H.C.	60	M	333	317	326	290	247	219
F.H.	51	F	588	566	590	401	317	280
T.N.	63	M	311	314	300	225	211	196
I.H.	47	M	499	480	503	367	281	211
P.B.	39	M	300	315	288	219	219	214
M.A.	52	M	356	367	350	300	300	217
F.B.	33	F	309	300	302	277	200	173
K.K.	45	F	366	348	351	300	219	199
B.Y.	65	M	301	299	279	240	232	221
E.E.	60	M	336	305	290	278	240	209
E.K.	62	M	470	433	402	274	223	222

TABLE 2
Total Serum Cholesterol Levels (mg.%) of Hypothyroid Patients with Hypercholesteremia Treated with Polysorbate 80-Choline-Inositol Complex (Four Weeks of Therapy)

Patient	Age	Sex	Pre-Treatment		Treatment			
			2 weeks	1 week	1 week	2 weeks	3 weeks	4 weeks
N.O.	36	F	522	531	400	299	261	209
P.M.	64	M	431	366	360	301	280	278
P.B.	52	M	406	398	312	263	200	195
L.B.	49	F	347	340	260	252	213	218
C.H.	50	F	531	497	500	422	309	300
M.N.	64	F	488	466	312	204	208	199
R.S.	44	M	616	501	533	400	319	319
A.S.	57	M	708	741	510	519	450	410

These reductions ranged from 82 to 426 mg. per cent. In general, the greatest reductions were obtained in patients whose pre-treatment levels were highest, as is best demonstrated in the hypothyroid cases. Lower levels persisted as long as therapy was continued.

In patients who demonstrated only minor reductions in cholesterol levels initially, increased total daily doses of 40 and even 60 cc. were administered without any side effect, and with the result that additional declines in serum cholesterol levels were observed. For example, patient Number 40, whose cholesterol level fell from 1073 to 648 mg. per cent during four weeks of therapy at the 20 cc. daily level, experienced a decline to 391 mg. per cent after

several weeks on a daily intake of 40 cc. In all cases, discontinuance of therapy was followed in one week by a rise in serum cholesterol approximately to the pre-treatment level.

Twenty-nine patients (71 per cent) were continued on medication beyond the 28 day test period for intervals of 35 to 180 days. Medication was withdrawn for one to four weeks at various times during the additional treatment period for this group. During the withdrawal period the blood cholesterol levels rose gradually to pre-treatment values. Re-institution of medication again resulted in reduction of the serum cholesterol. These observations are best illustrated in Figure 5. The weights of all the patients studied remained fairly constant during the entire period of observation.

All 41 patients treated with the complex reported a sense of well-being. Sherber and Levites (9) described this, and suggested that it may be due to increased output of formaldehydogenic steroids. Some of our patients noted moderately increased urinary output while taking the drug. We selected 16 of our 41 patients who had experienced diuresis and a sense of well-being. After four to six weeks on therapy these patients were given a placebo preparation. The placebo dose and other factors were kept constant; the patients were instructed to measure their urinary output during one week on therapy and another week on the placebo.

Only five of the 16 patients actually detected the difference between the medication and the placebo; two of these discovered a taste difference and the

TABLE 4
Total Serum Cholesterol Levels (mg.%) of Cardiovascular Patients with Hypercholesteremia Treated with Polysorbate 80-Choline-Inositol Complex (Four Weeks of Therapy)

Patient	Age	Sex	Pre-Treatment		Treatment			
			2 weeks	1 week	1 week	2 weeks	3 weeks	4 weeks
J.K.C.	60	M	426	441	382	309	311	318
L.J.	62	F	345	380	311	205	201	198
B.N.	63	M	358	350	316	311	314	300
H.Z.	42	M	334	312	346	300	299	208
S.A.	54	F	356	318	322	295	290	292
L.L.	58	F	462	404	322	318	245	211
O.Q.	44	M	500	519	495	418	372	318
L.V.	65	M	418	400	326	304	311	309
L.M.	42	M	503	399	300	229	206	177

other three felt they had diminished sense of well-being and vigor. The remaining 11 continued to report their sense of well-being even though their cholesterol levels gradually rose toward the pre-medication values. This would suggest either a carry-over effect of the medication or that the sense of well-being in part at least had a functional basis. The diuresis was at no time striking, and it was so variable that it was difficult to evaluate. Careful evaluation suggests that the medication has a mild diuretic effect if renal and cardiac function are normal. This was confirmed by failure to induce diuresis in patients exhibiting renal or cardiac failure.

One accidental finding appears worth mentioning. A patient with idiopathic hypercholesteremia associated with exogenous obesity was known to have cholelithiasis of the cholesterol variety. Two months before the study, a routine X-ray visualization had revealed numerous radio-translucent shadows. A repeat cholecystogram was carried out after the patient had been on therapy for five weeks and off it for three subsequent weeks. To our surprise, the X-rays failed to show these translucent areas. This patient was placed on a low fat, low calorie diet prior to this study, and was maintained on it during the test period.

This phenomenon was studied in two other patients, both having translucent, non-radiopaque shadows in their cholecystograms. Both were obese women, with normal gallbladder dye concentration and excretion. Neither had hypercholesteremia, and their obesity was attributed to exogenous factors. These patients were permitted to partake of food as

TABLE 3

Total Serum Cholesterol Levels (mg.%) of Familial Hypercholesteremic Patients and Obese Patients with Hypercholesteremia Treated with Polysorbate 80-Choline-Inositol Complex (Four Weeks of Therapy)

Patient	Age	Sex	Pre-Treatment		Treatment			
			2 weeks	1 week	1 week	2 weeks	3 weeks	4 weeks
W.A.	34	M	1116	972	719	700	601	448
J.A.	39	M	848	801	610	418	454	386
P.K.	47	F	456	477	320	290	300	288
K.H.	58	F	323	320	316	224	212	204
T.O.	63	F	491	437	300	228	220	220
F.J.W.	41	F	909	930	700	631	502	364
K.J.StJ.	39	F	766	768	521	501	499	419
B.J.	33	M	507	543	499	300	302	287
A.J.Sr.	57	M	1142	1005	900	780	711	648
A.J.Jr.	36	M	661	703	511	420	400	376

they had been doing. A regimen of 15 cc. of the polysorbate 80-choline-inositol complex three times daily for three weeks failed to produce appreciable changes in the cholecystograms taken a week after termination of therapy.

It is difficult to explain the incidental occurrence of cholesterol stone resolution in the first patient. It suggests to the author that possibly the medication in conjunction with a rigid low fat, low cholesterol diet, administered for the purpose of weight

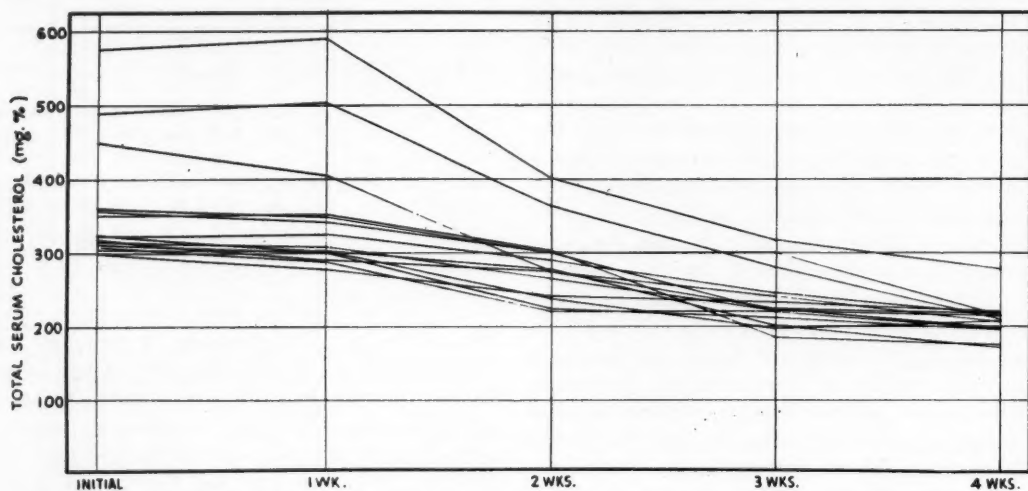


FIG. 1. Response of diabetic patients with hypercholesteremia to polysorbate 80-choline-inositol complex (4 weeks of therapy).

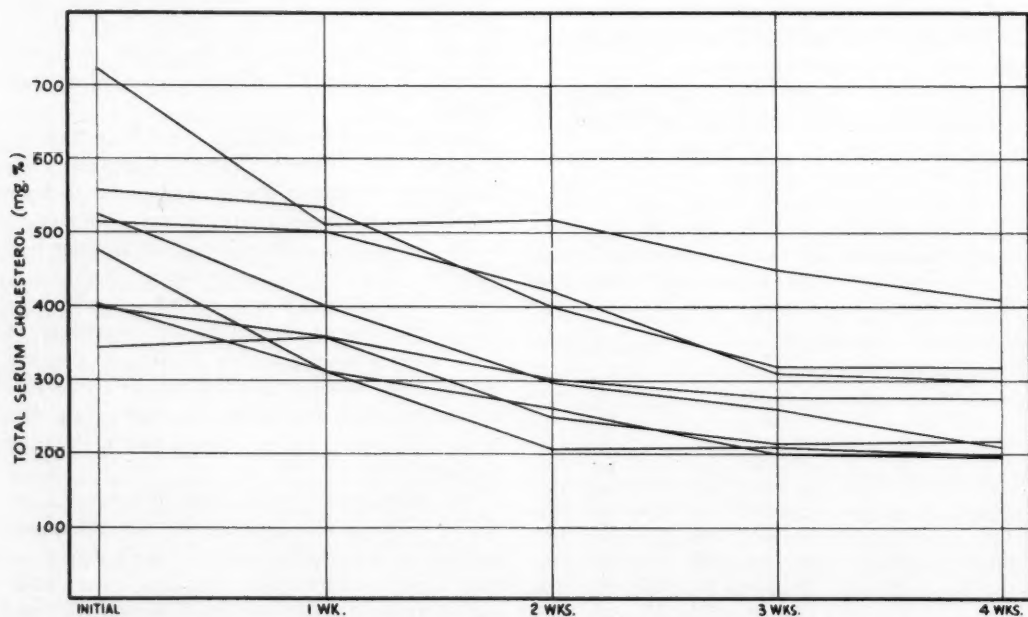


FIG. 2. Response of hypothyroid patients with hypercholesteremia to polysorbate 80-choline-inositol complex (4 weeks of therapy).

reduction was the answer, since the other two patients were not placed on restricted diets. This phenomenon will be investigated in a separate study.

Apart from occasional episodes of mild diarrhea and slight nausea when the larger doses were administered, no side effects were encountered. In no in-

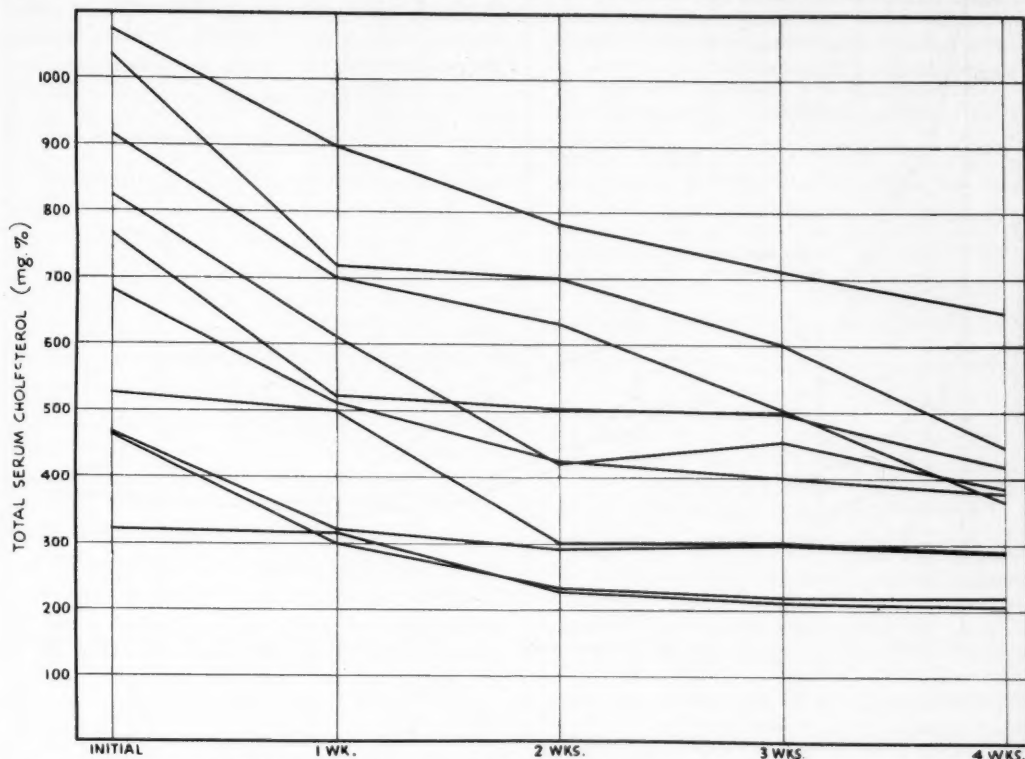


FIG. 3. Response of familial hypercholesteremic patients and obese patients with hypercholesteremia to polysorbate 80-choline-inositol complex (4 weeks of therapy).

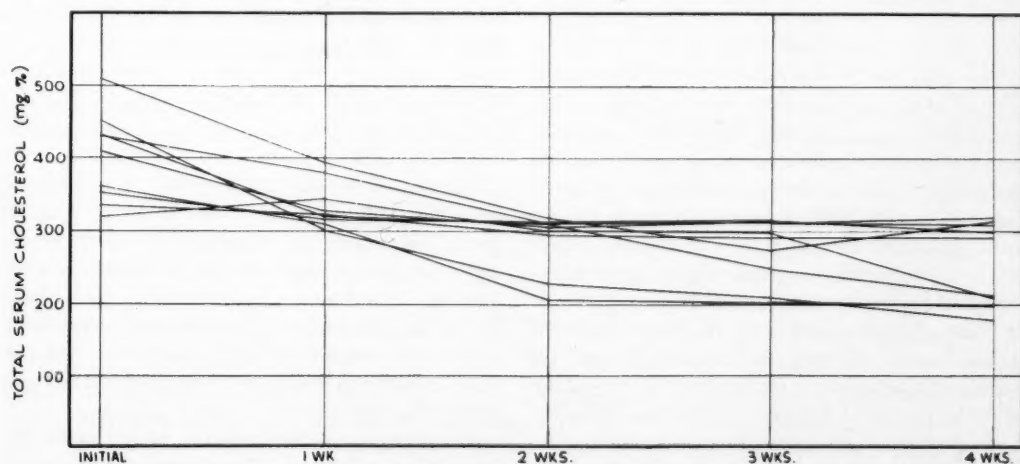


FIG. 4. Response of cardiovascular patients with hypercholesteremia to polysorbate 80-choline-inositol complex (4 weeks of therapy).

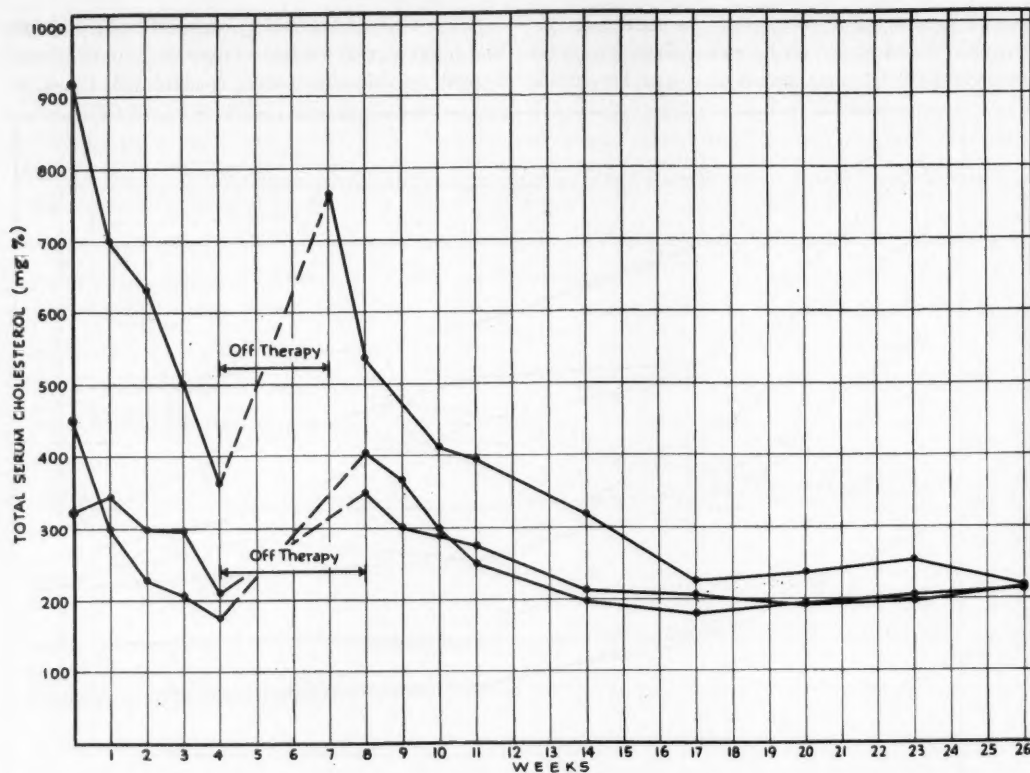


FIG. 5. Initial response, effect of withdrawal and re-institution of polysorbate 80-choline-inositol complex over a prolonged period of time in hypercholesteremic patients.

stance was it necessary to halt medication because of side effects.

COMMENT

The difficulty in controlling hypercholesteremia by diet alone indicates that some adjunct to diet would be of value. Recent studies have suggested that the state of cholesterol in the serum and not the quantity could be one important factor in atherogenesis. Hueper (12) has stated that it is not the total cholesterol content that is of decisive importance, but rather the abnormal proportion of cholesterol and plasmatic stabilizers or dispersing agents. In their original studies with the polysorbate 80-choline-inositol complex, Sherber and Levites (9) postulated that the state of the abnormal cholesterol might be such as to hinder its utilization. While the mode of action of the polysorbate 80-choline-inositol complex is as yet unknown, Sherber (13) has more recently reported that the complex stabilizes the "abnormal" cholesterol present in essential hypercholesteremia.

Polysorbate 80 as described by Krantz (14) is a complex mixture resulting from the reaction of ethylene oxide with a sorbitan fatty acid ester. It is both an emulsifying and non-ionic surface active agent with hydrophilic and lipophilic properties. Physico-chemically in proper proportion it has the ability to render fats and fat-soluble substances dispersible in aqueous media.

Polysorbate 80 was administered to a group of more than 100 subjects for periods ranging up to four years in amounts averaging 4.5 to 6.0 grams daily. No deleterious or pathologic laboratory findings were noted in any patients. Since polysorbate 80 was administered as an aid in the absorption of fat it was of considerable interest to note that the blood cholesterol levels did not demonstrate any increase beyond normal.

Phospholipids are said to act as carrier agents for fats in the blood stream. Though choline and inositol are integral components of the phospholipid molecule, of themselves they have been shown to have no significant effect upon serum cholesterol levels.

In mixture with polysorbate 80, however, apparent and marked cholesterol lowering effects are observed. A possible working hypothesis is that the polysorbate 80-choline-inositol complex more closely resembles an artificial phospholipid. Preliminary infrared analysis of the complex as constituted suggests the formation of a new compound (15).

SUMMARY

Forty-one patients with hypercholesteremia associated with various pathological entities were treated with a polysorbate 80-choline-inositol complex (Monichol®). In all patients there was a significant fall in serum cholesterol; in general, the higher the initial level, the greater the reduction achieved. Normal cholesterol levels were maintained only upon uninterrupted continuance of therapy. A sense of well-being was described by many of the patients, but a functional basis for this could not be excluded. No significant side effects were encountered in this series.

The effect of long range value of reducing hypercholesteremic levels, particularly with respect to the possibility of reducing arterial disease, remains to be established. Follow-up studies are contemplated.

The effect of the complex on solution of cholesterol stones is suggested only in comment and without conclusion; further studies of this action are now in progress.

701 Cathedral Street
Baltimore 1, Maryland

BIBLIOGRAPHY

1. KELLNER, A., CORELL, J. W., AND LADD, A. T.: Influence of Intravenously Administered Surface Active Agents on Development of Experimental Atherosclerosis in Rabbits, *J. Exper. Med.* **93**: 385, 1951.
2. GOFMAN, J., LINDGREN, F., ELLIOTT, H., MANTZ, W., HEWITT, J., STRISOWER, B., AND HERRING, V.: The Role of Lipids and Lipoproteins in Atherosclerosis, *Science* **111**: 166, 1950.
3. JONES, H., GOFMAN, J., LINDGREN, F., LYON, T., GRAHAM, D., STRISOWER, B., AND NICHOLS, A. V.: Lipoproteins in Atherosclerosis, *Am. J. Med.* **11**: 358, 1951.
4. Evaluation of Serum Lipoprotein and Cholesterol Measurements as Predictors of Clinical Complications of Atherosclerosis: Report of a Cooperative Study of Lipoproteins and Atherosclerosis, *Circulation* **14**: 691, 1956.
5. LAWRY, ELEANOR Y., MANN, GEORGE V., PETERSON, ANN, WYSOCKI, ALICE P., O'CONNELL, RITA, AND STARE, FREDERICK J.: Cholesterol and Beta Lipoproteins in the Serum of Americans—Well Persons and Those with Coronary Heart Disease, *Am. J. Med.* **22**: 605, 1957.
6. AHRENS, E. H., JR., TSALTAS, T. T., HIRSCH, J., AND INSULL, W., JR.: Effects of Dietary Fats on the Serum Lipides of Human Subjects, *J. Clin. Investigation* **34**: 918, 1955.
7. KINSELL, L. W., ET AL.: Dietary Modification of Serum Cholesterol and Phospholipid Levels, *J. Clin. Endocrinol.* **12**: 909, 1952.
8. BEVERIDGE, J. M. R., CONNELL, W. F., MAYER, G., FIRSTBROOK, J. B., AND DEWOLFE, M.: The Effects of Certain Vegetable and Animal Fats on Plasma Lipids of Humans (abstract), *Circulation* **10**: 593, 1954.
9. SHERBER, D. A., AND LEVITES, M. M.: Hypercholesteremia: Effect on Cholesterol Metabolism of Polysorbate 80-choline-inositol Complex, *J. A. M. A.* **152**: 682, 1953.
10. ALBERT, ARNOLD, AND ALBERT, MONROE: Cholesterol Metabolism—Evaluation of Polysorbate 80-choline-inositol Complex (Monichol®) for the Management of Hypercholesteremia, *Texas State Journal of Medicine* **50**: 814, 1954.
11. PEARSON, S., STERN, S., AND MCGAVACK, T. H.: A Rapid, Accurate Method for the Determination of Total Cholesterol in Serum, *Anal. Chem.*, **25**: 813, 1953.
12. HUEPER, W. C.: Pathogenesis of Atherosclerosis, *Amer. J. Clin. Path.*, **26**: 6, 559, 1956.
13. SHERBER, D. A.: Hypercholesteremia, *Am. Pract. and Dig. of Treatment* **8**: 5, 776, 1957.
14. KRANTZ, J. C., CULVER, P. J., CARR, C. J., AND JONES, C. M.: Sugar Alcohols—XXVIII, Toxicologic, Pharmacodynamic and Clinical Observations on Tween 80, *Bull. Sch. of Med. University of Maryland*, Vol. 36, No. 2, April, 1951.
15. MAIESE, M. R., personal communication.

REMINDER—HOTEL ROOM RESERVATIONS

APRIL 15, 16, and 17, 1959

ANNUAL MEETING OF MEDICAL AND CHIRURGICAL FACULTY

A block of rooms has been set aside at the Sheraton Belvedere Hotel, Charles and Chase Streets, Baltimore, for those attending the Annual Meeting of the Medical and Chirurgical Faculty in April. The Hotel will take your room reservations *now*. When making your reservation be sure to mention that you will be attending the Annual Meeting of the Faculty.

ARTICLES OF INTEREST

LYSERGIC ACID DIETHYLAMIDE—A REVIEW

IRVIN D. YALOM, M.D.

One of the most intriguing and highly popularized psychiatric phenomena of the past few years has been the emergence of a new class of drugs referred to as hallucinogens, of which the best known is the diethylamide of lysergic acid. The purpose of this article is to summarize the basic features of lysergic acid diethylamide, as obtained from a review of the important literature, coupled with the author's personal experience with the drug and observations of its effects on others.

PHARMACOLOGY (1-4)

Lysergic acid was first synthesized in 1938. Its psychological effects first became known in 1943 when Hoffman, a Swiss chemist, while working with the drug in the laboratory suddenly became restless and dizzy and then experienced a two-hour state of "drunkenness" marked primarily by extraordinarily vivid and colorful visual imagery. Having subsequently returned to normal, Hoffman was able the next day to duplicate the experience by ingestion of the same drug. (5)

LSD-25 in solution is a colorless, tasteless liquid indistinguishable from water. It belongs to the ergonovine group of ergot alkaloids, all of which have lysergic acid as a base. Although the hallucinogenic drug is usually referred to as lysergic acid, it is actually the diethylamide of lysergic acid. It is closely related to ergonovine and has definite oxytoxic powers on the rabbit uterus, only slightly less than that of ergonovine. Radioactive studies of tagged carbon atoms on the lysergic acid molecule show that the drug is completely and quickly absorbed from the gastrointestinal tract, remains a short time in the blood stream, and then is dispersed to various organs, especially the liver, the kidneys, the adrenals and the intestine. Only a relatively small proportion of the drug is concentrated in the brain, and the psychological effects of the drug persist long after all traces have disappeared from the central nervous system. The drug is completely excreted by the liver.

Lysergic acid is not the first hallucinogenic drug known; mescaline has been known for centuries and may yet prove to be a more important drug than lysergic acid, for it is structurally more closely related to natural body constituents, especially compounds in the adrenaline cycle.

Apparently one of the reasons that lysergic acid has gained such prominence is that it is effective in incredibly small doses, the normal adult dose being one microgram per kilogram of body weight. If taken orally, the onset of action occurs in 20 to 40 minutes; the peak of the drug's action occurs from 90 to 150 minutes after ingestion; and the total duration of the drug's effect is from nine to 12 hours. If given intramuscularly or intravenously the peak effects occur sooner, but the total duration of action is approximately the same. Hoch has shown that when administered intrathecally the drug produces almost instantaneous psychological changes. (6)

PHYSIOLOGICAL EFFECTS

Most of the physiological effects of lysergic acid are mediated through the autonomic nervous system, the majority being sympathomimetic in nature. There is dilation of the pupils (occurring 15-20 minutes after ingestion), sweating, flushing, anorexia, nausea, occasional vomiting; deep tendon reflexes are accentuated; blood pressure is usually increased; there is involuntary giggling and laughing. (7, 8) The author has seen one incidence of urinary incontinence in a young female. The only consistent changes of those cited are dilation of the pupils and accentuation of the deep tendon reflexes.

Changes found in the electro-encephalogram are disappointingly few, the only consistent finding being an increase of one to three cycles per second in the alpha rhythm. (5, 7, 9) Some form of dysarthria may be demonstrated in approximately 30 per cent of those taking the drug. (10) LSD-25 causes the adrenal cortex to be less responsive to ACTH. It decreases urinary phosphate excretion but markedly increases it after stimulation by ACTH. (It has

been pointed out that a similar pattern is seen in chronic schizophrenics.) (8, 11)

PSYCHOLOGICAL EFFECTS

By and large the LSD experience is a pleasurable one, with most of the volunteers signing for a repeat experience. However, the author has observed several instances in which apparently stable individuals found the LSD-25 experience a markedly unpleasant and even a terrifying one. These volunteers literally pleaded for an injection to end the experiment and would, under no condition, ingest the drug again. Several psychoses have been precipitated, some with suicidal inclinations, particularly in individuals with pre-psychotic personalities. (7, 12) Occasionally some particularly undesirable effects of the drug last for several days after ingestion, (13, 14) and it should be administered only under carefully controlled situations with well-trained personnel.

There are several important determinants of the LSD reaction. For example, a decreased amount of food or sleep results in a more severe reaction. Personality is of utmost importance; a pre-psychotic individual may undergo a full unfolding of his psychosis. If the patient is kept busy, for example with psychological testing, the reaction is usually less. Solitude always increases severity of the reaction. Mental set is significant, a psychiatrist usually deriving more from the experience than a layman, as will a patient eager to please his psychiatrist.

The course of events—(1) the prodromal effects beginning approximately twenty minutes after ingestion of the drug and lasting about one hour and a half consist primarily of autonomic changes and associated symptomatology; (2) the height of reaction occurs one to five hours after ingestion of the drug; and (3) the end of the reaction is from five to twelve hours. During this period there is usually reduced activity, poverty of thought, indifference, flat affect and shallow tone comparable in some ways to a simple schizophrenic reaction. (10) After-effects of the drug may last from one to several days, with subdued behavior, irritability, and frequently increased introspection.

Perceptual anomalies—Visual anomalies predominate; the very hallmark of lysergic acid is a great increase in visual imagery. With one's eyes closed or opened in a dark room, one sees bright yellow coils, flowers, bursting bombs, stained glass windows, peacock feathers and complex linear patterns. These

are received by the individual with exhilaration and he is often disturbed when requested to interrupt the imagery in order to describe it to observers. Occasionally, especially with higher doses, there will be a complex hallucination. One individual, for example, hallucinated a group of Mexican peons dancing in the center of the room. (7) Occasionally there will be frightening images. Several individuals have reported movements of the walls, as if the room were breathing in and out.

Auditory hallucinations are very rare, although hyperacusis has been reported. Gustatory hallucinations are likewise rare; nonetheless, there have been several reports of a metallic or tobacco taste in the mouth. Body distortions are common: anesthesia of various parts of the body occur; one leg may feel more connected to the body than another; one subject complained of feeling a hole in his head. (7)

The sense of time is distorted in 70 per cent of subjects. Ego sense is disturbed in approximately 50 per cent of volunteers. (7) A vague, indescribable estrangement takes place in which the individual may, for example, have difficulty in recognizing himself in a mirror or may feel he is looking down upon his own form from a height. There prevails a general sense of unreality; of living out a dream.

Language changes noted are echolalia and occasional condensation of words. Affect is frequently blunted, though sometimes great lability of mood occurs. One individual alternately laughed and cried hysterically throughout the entire experience. Suspiciousness, especially as directed towards the observer, is a common phenomenon. Under the influence of lysergic acid the subject retains insight at all times and is constantly aware that he has taken a drug and is participating in an experiment. Clouding of consciousness is rarely seen, but poverty of thought, impairment of abstract thinking, indecision, and distractibility often manifest themselves. (7, 10, 16) Wechsler-Bellevue studies reveal that LSD-25 disturbs concentration, impairs contact with the environment, and generally reduces intellectual functioning.

SIGNIFICANCE OF LYSERGIC ACID

Towards an understanding of the schizophrenic process—Lysergic acid caused a tremendous amount of interest a few years ago when first introduced by early writers as a psychotomimetic drug—a drug which, when given in infinitesimally small doses,

creates in normal individuals a state highly suggestive of schizophrenia. Some of the LSD phenomena *comparable* to schizophrenic symptomatology are: (3, 7)

- 1) shallow, blunted affect (though occasional marked lability of mood is seen)
- 2) feelings of depersonalization, unreality, suspiciousness, hostility
- 3) disorders in thought processes—blocking, autism, retardation
- 4) hallucinations (with higher doses)
- 5) important pathology in interpersonal relationships (increase in moving *away* from people; avoidance, withdrawal; increase in moving *against* people; hostility and suspicion; increase in moving *towards* people; in seeking support, reassurance; decrease in moving *with* people) (8)
- 6) sense of time distortion
- 7) psychological testing results which show marked similarities in the two states; Rorschach responses reveal difficulties of abstract and associative thought and lack of concern about behaviours and responses (8)
- 8) decreased adrenal responsiveness to ACTH in both states
- 9) abnormalities in the urinary excretion of phosphates

Today, however, after a few years of controlled observation, one can easily compile an equally impressive list of LSD phenomena which are *dis-similar* to schizophrenic characteristics: (10, 18)

- 1) visual perceptual distortions under LSD-25 (the increase in visual imagery in LSD state is almost never seen in schizophrenia)
- 2) retention of insight at all times under LSD-25
- 3) rarity of hallucinations under LSD-25, except visual; (auditory hallucinations so common in schizophrenia are singularly infrequent in LSD state)
- 4) no familiar aspects of schizophrenic thinking such as condensation, omission, neologisms, archaic or prelogical thought processes
- 5) usually consistent harmony between thought content and mood under LSD-25
- 6) LSD-25 almost never produces a delusional process

It appears, therefore, that the LSD state bears only a superficial resemblance to schizophrenia.

At first, because of the supposed close resemblance

between the LSD state and schizophrenia and because of the infinitesimal small amounts of lysergic acid required, it was difficult to dismiss the possibility that perhaps in psychotics there is a small amount of circulating LSD-like substance. In connection with this, it is of interest that psychotics are almost uniformly resistant to LSD-25 and require three to six times the normal dosage to obtain the common psychological effects. The hypothesis proposed was that perhaps in psychotics there is an LSD-like substance already circulating, to which the addition of tiny extrinsic amounts of LSD-25 would have no effect on the psyche. It was also noted that LSD-25 can be almost completely synthesized from dipeptides, tripeptides and tryptophanes, all of which are normal metabolic body substances (7).

Isbell's experiments are important in refuting this hypothesis (19). He gave LSD-25 in large daily doses to subjects over a period of 77 days. Tolerance could be demonstrated after a few days, subjects soon losing any effect, either physiological or psychological, of the drug. There was no response to a single administration of the drug up to four times the normal dose. At the end of the 77 days the subjects were unaware that the experiment had concluded and that tap water placebos had been substituted.

Nevertheless, the valuable point has been made that it is possible for a circulating substance in amounts too small to be measured to cause an abnormal mental state in humans. It is also possible that perhaps the long-standing stress and the tendency to decreased responsiveness of the adrenal play some part in the resistance of the psychotic to LSD-25. It has been shown that the greater the initial sympathetic overactivity, the less LSD-25 is needed. Studies of blood pressure responses to adrenaline before and after LSD-25 suggest that the drug tends in some way to antagonize epinephrine. Spiders given lysergic acid weave an increasingly thinner web, (adrenaline being indispensable in the manufacture of the spider's web.)

Lysergic acid as a medium for experimentation with new psychiatric drugs—Because lysergic acid produces an easily controllable, short-lived, easily reproducible, abnormal mental state, it is potentially a valuable medium for testing the efficacy of new drugs in psychiatry. Unfortunately, however, there have been no practical contributions made. Amongst the many drugs which have been tried in

an effort to block the LSD reaction the most noteworthy are:

- 1) thiorazine, which has been the most successful blocking agent, mitigates many of the psychological and almost all of the physiological effects of LSD-25 whether given orally before administration of LSD-25 or intravenously or intra-muscularly at the height of reaction (7, 29). It is the feeling of Isbell (19) and also of the present author that there is no specificity about the blocking action of thiorazine and that it is effective primarily because of its sedative effects.
- 2) succinic acid, which has proved effective in large doses (7)
- 3) nicotinic acid, which when given at the height of reaction markedly reduces LSD-25 symptoms (7, 22, 23)
- 4) large doses of barbiturates, which have a transitory blocking effect (7, 21)
- 5) meratran (the isomer of frenquel) which has a very transitory LSD blocking effect, has found some limited clinical use in the treatment of reactive depression (7)
- 6) frenquel; Fabing (24, 25) reported great success with this drug both in combating the LSD-25 psychosis and in acute hallucinatory schizophrenic states. His work, however, has not been confirmed; other investigators not only found frenquel ineffective in acute hallucinatory states but also of no value in blocking the LSD-25 psychosis. (19, 26-28)
- 7) reserpine, which causes either no effect or a more severe reaction

Lysergic acid per se in the treatment of mental disease—In the treatment of mental disease, lysergic acid has been found to have the following qualifications. It facilitates recall of past experiences and repressed material. It decreases resistance, allowing the patient to re-examine and re-evaluate this material; and while it reactivates anxiety and fear, there is sufficient euphoria to permit recall of the provoking experience. In this regard it is often successful with patients who have resisted revealing such material, including many chronic patients with frequent failures with insulin, amytal, ECT, etc. (30) In almost every case a psychocathartic effect is noted. (31)

There is another way in which lysergic acid may be used in the treatment of mental disease. Al-

though its role here is an indirect one, it is possible that this may be lysergic acid's most important virtue. I am speaking of the utilization of lysergic acid by the psychiatrist to allow him to enter in some small way into the distorted world of the schizophrenic. By experiencing feelings of unreality, of depersonalization, of time distortion, he may be better equipped to deal more sympathetically and more effectively with these symptoms in his patients.

Summary—The basic features of the hallucinogenic drug, lysergic acid diethylamide, have been reviewed in terms of pharmacology, effects, and significance. Despite its intriguing nature and initial promise in the field of psychiatric research, studies with the drug have not yet resulted in any outstanding contributions to clinical psychiatry.

*Johns Hopkins Hospital
Baltimore 5, Maryland*

BIBLIOGRAPHY

1. CERLETTI, A., *Lysergic acid diethylamide and related compounds*, Josiah Macy Foundation, N. Y., 1956, p. 9.
2. BOYD, E. S. ET AL, *Journal of nervous and mental diseases*, **122**: 470, 1955.
3. ROTHLIN, E., *Nature*, **178**: 1400, 1956.
4. BOYD, E. S. ET AL, *J. Pharmacol. Exper. Therap.* **113**: 6, 1955.
5. RINKEL, M. ET AL, *American journal of psychiatry*, **108**: 572, 1952.
6. HOCH, P., in *Lysergic acid diethylamide and mescaline in experimental psychiatry*, ed. by L. Cholden, Grune, 1956.
7. BERCEL, N. A. ET AL, *Archives of neurology and psychiatry*, **75**: 588, 1956.
8. RINKEL, M. ET AL, *American journal of psychiatry*, **111**: 881, June 1955.
9. ANDERSON, E. W., RAWNSLEY, K., *Monatsschr. Psychiat. u. Neurol.*, **128**: 38, 1954.
10. DE SHON, J. J. ET AL, *Psychiatric quarterly*, **26**: 33, 1952.
11. HOAGLAND ET AL, *Archives of neurology and psychiatry*, **73**: 100, 1955.
12. ABRAMSON, H. A., *Journal of psychology*, **41**: 199, 1956.
13. ELKES, C. ET AL, *Lancet*, **268**: 719, Vol. I, 1955.
14. COOPER, H. A., *Lancet*, **268**: 1078, Vol. I, 1955.
15. SAVAGE, C. in *Lysergic acid diethylamide and mescaline in experimental psychiatry*, ed. by L. Cholden, Grune, 1956.
16. ABRAMSON, H. A. ET AL, *Journal of psychology*, **40**: 367, 1955.
17. LEVINE, A. ET AL, *Journal of psychology*, **40**: 385, 1955.
18. ISBELL, H. ET AL, *Archives of neurology and psychiatry*, **76**: 468, 1955.

19. ISBELL, H. AND LOGAN, C., *Archives of neurology and psychiatry*, **77**: 350, 1957.
20. RINKEL, M. ET AL, *Diseases of the nervous system*, **15**: 259.
21. HOCH, P. H., *American journal of psychiatry*, **111**: 787, 1955.
22. AGNEW, N. AND HOFFER, A., *Journal of mental science*, **101**: 12, 1955.
23. HOFFER, A., in *Lysergic acid diethylamide and mescaline in experimental psychiatry*, ed. by L. Cholden, Grune, 1956.
24. FABING, H. D., *Neurology*, **5**: 319, 1955.
25. FABING, H. D., *Science*, **121**: 208, 1955.
26. LEMERE, F., *American journal of psychiatry*, **113**: 840, 1957.
27. BARSA, J. A. AND KLINE, N. S., *American journal of psychiatry*, **113**: 255, 1956.
28. ISBELL, H., *Fed. Proc.*, **15**: 442, 1956.
29. SCHWARZ, B. E., BICKFORD, R. G., AND POME, H. D. *Pro. staff meet. Mayo Clin.*, **30**: 407, 1955.
30. BUSCH, A., AND JOHNSON, WARREN C. *Diseases of the nervous system*, **11**: 241, 1950.
31. FREDERKING, W., *Journal of nervous and mental disease*, **121**: 262, 1955.

CONTRIBUTIONS OF RELIGION TO PSYCHIATRY*

EDWARD L. SUAREZ-MURIAS, M.D.

N.B. Doctor Suarez-Murias is a Fellow of the American Psychiatric Association, Instructor in Psychiatry at The Johns Hopkins University, Psychiatrist at The Johns Hopkins Hospital, Visiting Staff Member at The Seton Institute.

The psychiatrist practices the art and science of medicine as it applies to mental illness, and as he seeks to relieve suffering and to restore patients to health he is bound to realize that a fundamental problem immediately confronting him is that of the nature of man. The person who possesses religious faith believes that man has a soul as well as a body, and that both are active in the living man. The psychiatrist with religious faith is led sooner or later to accept this belief as part of his attitude in treatment. It becomes obvious that "man is to be studied in his whole manhood; that a man is not a man without his body, just as he is not a man without his soul" (1). Therefore, one has to consider that the nature of man is not only material but also spiritual, and that if one is to treat man in a complete sense one must be attentive to the implications of his possessing a soul as well as a body. Religion offers knowledge about the spiritual functioning of man, and spiritual functioning is part of personality function. While psychiatry is a study of mental illness and its treatment, nevertheless to be conducted soundly this study must include knowledge about the person and personality function in health as well as in disease. It is inescapable that the spiritual aspects of the functioning of man should be included.

Is it possible to dispense with spiritual considerations and metaphysical conceptions in treating the patient? This is being done, but if the existence of the soul and of spiritual functioning is a reality, then such an approach is a limping one and would have to be considered incomplete. Furthermore, there would be the danger of treating the patient in a mechanistic, deterministic way, as if he or she were the most highly organized biologic machine on earth, and no more. Even if one tries to avoid this material attitude, and one decides to respect each patient as an individual human being with his or her own beliefs, there are areas in the course of treatment where one would find that gaps become noticeable and method is lacking to deal with real problems such as the formulation of goals for living, or the development of a philosophy of life. And even before such ultimate areas might be reached in psychotherapy, there are other gaps in concept and method that become noticeable as one explores motivation, or else the apparent lack of it; as one studies the activity, either conscious or unconscious, which leads to the development of guilt feelings; and as one seeks understanding of some of the natural forces that man is endowed with, such as will power, and some of the conflicts that man becomes involved with in life, such as that of good versus evil.

In many subtle ways one discovers the spiritual side of these problems as real issues in the course of psychiatric practice. Philosophers and theologians have tried to alert us to the significance of these same issues through the ages, but unfortunately, too often one is more inclined to become a spectator in de-

* Presented at a meeting of the Maryland Chapter of the Academy of Religion and Mental Health, Tuesday, March 4, 1958 at the Psychiatric Institute of University Hospital.

bates or a partisan in controversies, rather than study the good points that these men have presented for us. Psychiatry and religion have been involved in just such an experience of debate and controversy in recent decades, and it is only within the past five years or so that psychiatrists and the religious have made concerted efforts to study the good points in each other's teachings—with such movements as ours in the Academy—rather than remain unattentive, misinformed or overcritical to the vital teachings which each has to offer (2, 3).

In order to enhance the psychiatric understanding of man and the psychotherapeutic effort by accepting what religion has always considered factual, namely, that man is body and soul, it is necessary to develop additional theory and method in psychiatry, and to modify where pertinent what has already been found useful and valid in those theories and methods which prefer not to be involved with the question of soul. For instance, it is necessary to postulate in what respect a spiritual force can be considered superior to a material one; also, in what respect a material force can counter, or else distort, the spiritual force; and finally, at what levels of consciousness these exchanges occur, and in which direction one may expect them to move. At this point I would have to limit myself to explaining my manner of working out these problems. I find it more useful and more realistic to consider as basic spheres in the personality the spiritual, the intellectual† and the emotional, in that hierarchical order (as they function in the psychologically mature adult, while their activity becomes manifested in reverse order in the course of individual growth and development towards maturity), rather than limit myself to the framework of id, ego and superego with the ego ideal.‡ This pertains to basic structure. Concerning a useful functional concept, I find valid the idea of the conscious, preconscious and unconscious spheres of activity. I would maintain that the unconscious is not chaotic in all its areas, but quite dependable in the unconscious spiritual area, and basically organized along the lines of conflict between good and evil. In fact, I would say that there are times when the individual is more true to himself through the unconscious rather than through his conscious behavior, and I would also say that by basic definition embracing spiritual concepts, the unconscious in its activities tends toward the good and not merely toward the indifferent or the existential as such.

To obtain this perspective it is, indeed, necessary to amplify some of the basic concepts of personality structure and function which have been very useful in psychiatry so far but which carry with them self-limitations. Just as psychiatry has contributed a certain insight to a number of religious problems involving freedom of will, atonement for guilt feelings and the practice of pseudo-virtue by disclosing the unconscious intricacies of these questions, so religion has contributed to psychiatry the basic tenets that certain metaphysical forces, such as faith and love, can exert more influence at a given moment or in the long run in the functioning of personality than repetitious analysis carried on without attention to the spiritual value of these forces.

I have been obliged to talk in general terms, for there are so many ways in which my knowledge of religion has contributed to my understanding of psychiatry that I could not discuss them all in a short period of time. But in a more specific sense, there are very practical issues like self-gratification, self-centering, self-satisfaction, self-sacrifice and

† The term *intellectual* used by this writer does not have the same connotation as the term *intellect* as used by St. Thomas and in scholasticism. *Intellectual* denotes things pertaining to the intellect or understanding, that is, to the power or faculty of knowing by virtue of the material or organic components in the brain which, activated by the soul, permit man to think. In present-day language the same is meant but the idea of soul is not necessarily implied. The scholastic term *intellect* refers particularly to the cognitive capacity of the soul, which it cannot exercise perfectly if separated from the body.

‡ In general, but in a more limited sense, id, ego and superego with the ego ideal correspond to the emotional, intellectual and spiritual spheres. The emotional and the intellectual spheres concern the cellular activity of the brain, the material aspects of sensation and of intelligence. The spiritual sphere concerns any activity connected with the soul, which is endowed with cognitive and appetitive attributes, such as the use of reason and of will and the desire for the good. These three parts are comparable jointly to the intellect and senses of St. Thomas Aquinas' philosophy. The cognitive and appetitive activities of the soul correspond primarily to the spiritual sphere, but as noted by Aquinas, "Because the soul of man is the form and actuality of matter, there proceed from its essence certain powers affixed to material organs from which it accepts the object of its immaterial knowledge. Indeed, body must act first, through the senses, before soul can act through the intellect". Cf. Brennan, Robert Edward, O. P., Ph.D. *Thomistic Psychology*. The Macmillan Co., New York, pp. 195 and 197, 1941.

self-giving which have to be considered in the spiritual as well as the material aspects, in addition to being studied from the conscious as well as from the unconscious standpoint. This means, for instance, that narcissism can be understood more completely and realistically when studied progressively at the emotional, the intellectual and the spiritual levels; and spiritual narcissism can be better understood when pride as religion views it is incorporated in the total concept of self-centering. This means that guilt feelings, when considered from the moral angle also, and not just in a material sense, can be more handily disposed of. It also means that the development of psychologic maturity can be rendered more significant and more accessible to the understanding of the patient when the spiritual sphere is included in the concept of personality structure and development.* When more strictly religious topics of personality function such as sacrifice, charity towards other human beings and personal satisfactions to be gained in life, including love, are distinguished from the more material counterparts termed masochism, egotism and hedonism, then the steps leading to maturity in the person become clearer.

In practice this approach of including spiritual considerations and values in psychotherapy has been extremely meaningful to patients and has given them material for very serious thought about themselves and their role in the world.

*To understand personality structure, function and development it is essential to approach its study in a dynamic sense, in accord with nature. For dynamic purposes, the qualitative subdivision into spiritual, intellectual and emotional spheres is made. In essence it is not possible to separate exactly these parts, and one can only speak of predominance of activity, more spiritual, more intellectual or more emotional at a given time. At birth, the more emotional sphere of personality is in evidence, the others not; as the person grows, the more intellectual appears, and finally, the more spiritual. The progressive development of each makes the person view life with a frame of reference that is primarily emotional at first, gradually becomes more intellectual and eventually more spiritual. There is considerable variation in development before psychologic maturity begins to be achieved, usually after the age of thirty; in this framework, the spiritual, intellectual and emotional spheres are hierarchically subordinate one to the other while in harmony as a whole, and maturity as such is achieved only in a relative sense.

To summarize, the following simple points are obvious to the psychiatrist with a religious faith which he makes use of in treatment:

- (1) consider man as a whole unit including the soul;
- (2) organize psychiatric discipline taking this into account;
- (3) learn to distinguish between the more physical, mechanical, purely physiologic activities of the organism, and the more metaphysical, abstract, yet real forces which influence the activities of the organism, and which we call spiritual, by learning to search for their interrelation and interdependence in a more fully psychophysiologic sense;
- (4) realize that the patient has the use of reason and that he is not an emotional machine, nor at all times a slave of emotion, nor even a glorified computer or calculating machine;
- (5) realize that the patient possesses a spiritual potential to be tapped if it has not been, and realize that if the patient accepts the spiritual, he deserves exposure to (and one should not hesitate to offer) additional knowledge and experiences concerning the interrelation of spiritual and material forces;
- (6) finally, and most essential, maintain an attitude of research concerning how the spiritual and the material domains interact. To do this, one may begin with the realization that matter cannot constitute an absolute measure in the exchange but that energy is the fundamental basis and relative measure for the exchange, particularly that form of energy known as light, which not only illuminates the material world but gives faith and insight in the spiritual sense and can add to sound knowledge.

*11 East Chase Street
Baltimore 2, Maryland*

BIBLIOGRAPHY

1. CHESTERTON, G. K., Saint Thomas Aquinas,—"The Dumb Ox," Image Books, Doubleday and Co., Inc., N. Y., p. 37, 1957.
2. ZILBOORG, G., Psychopathologie Scientifique et Questions Religieuses, Contributions à l'Etude des Sciences de l'Homme, Edité par le Centre de Recherches en Relations Humaines, Montreal, 2: 29-40, 1953.
3. PIUS XII, POPE, An Address on Psychotherapy and Religion (April 13, 1953) Ed. National Catholic Welfare Conference, Washington, 1953.

WHAT PSYCHIATRY HAS CONTRIBUTED TO RELIGION*

RABBI URI MILLER

Our Academy of Religion and Mental Health stands not only for a spirit of harmony in the relationship between clergyman and psychiatrist, but indicates a mutuality of interests. We are allies in seeking to treat the whole man; our points of agreement far outweigh our points of disagreement. Both of us are concerned with the inner man, and both are concerned with seeking to bring about a harmony within man, whether we call it healing or salvation. Under these circumstances it is obvious that there has been a reciprocal effect of each discipline upon the other. We may hesitate to give credit, but the expanding knowledge of man's inner life and the techniques of influencing it for good are so large and significant a field of legitimate joint effort that there is ample room for reciprocity and help in understanding and influencing this, personality growth, in man.

May I state at the outset that psychiatry has had a wholesome effect upon the personality of the clergyman and his approach to the problems of human relationships. It has given him humility, a virtue needed by all; it has made him sensitive to the complexities of human personality; and has caused him to question the exhortatory authoritative techniques classical to the clergyman. Moreover, it has brought about the acceptance of clinical scientific techniques on the part of many clergyman in their own professional work in this common field.

I would like to consider several basic concepts of religion and indicate how psychiatry has given us new insights into these time-hallowed concepts. I shall consider love, sin, repentance, and free will and determinism. All of these subjects, long the stamping ground of religion, have been affected in larger or smaller degree by the impact of psychiatric studies and findings.

Love has been the cornerstone of the religious life. To love God and one's fellow man has been basic in the Judaeo-Christian tradition. Now psychiatry has come and indicated that the absence of love (repressed hostilities and stored hates) is the feeding ground of neurosis. In this sense, the meaning of

religion has taken on added force since it has been the advocate of love in all human-divine relationships. The sense of compassion kept alive by religion has become the cornerstone of psychiatry. The new insights into the psychic nature of man have confirmed the religious truth that man can only survive as he learns to love. Love could no longer be regarded as some romantic, sentimental notion exuding a momentary nonsensical loss of reason—but as the most reasonable and the most necessary relationship in life. Love is the power which keeps men from being harmed in life; its loss or its withdrawal may shape the monstrosity of a Hitler. For religion this implementation of love is the meaning of the ethical—the ethical ground which sees men as persons not as things; the human "I-thou" relationship is one of the most necessary scientific truths of our day. In its struggles for man's worth, religion has thus received significant help from psychiatry.

The negative aspect of this same relationship is designated, in the terminology of religion, as sin. "There is no man upon earth," sayeth the Bible, "who doeth good and sinneth not." Much of the ceremonial of religion revolves about purging man of his sin. Psychiatry has given us a new dimension of insight into the meaning of sin. It has buttressed religion which calls man to account for his sin, by accounting in realistic fashion for his sinfulness.

We are indebted in great measure to Freud for giving us a clearer understanding of the forces in man, in relation to society, that can be held responsible for the distorted expressions of human personality we consider sinful. Through Freud and his analysis and evaluation of the effect of the unconscious upon man's conduct, we became aware that sin can no longer be considered a willful act on the part of man, or a rebellion against God, but as a product of the natural forces developed within the life situation. Concealed rages and stored hatred in the unconscious; unexpressed conflict with the world of adult authority; guilt, anxiety and repressed desires; all of these hinder man in his natural growth. Their distorted expression under the whiplash of the superego results in neurosis; the breeding ground of sin in the societal sense.

* Presented at a meeting of the Maryland Chapter of the Academy of Religion and Mental Health, Tuesday, March 4, 1958 at the Psychiatric Institute of University Hospital.

ACHROM
ACHROM
ACHROM
ACHROM
ACHROM
ACHROM
ACHROM



Tetracycline with Citric Acid **LEDERLE**

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



Thus Freud entered the precincts of morality and ethics. Not only did he account for sin but gave it an inevitability. Man innately rebels and in the measure of his rebellion and its resolution lies his inner health. Man is not born *tabula rasa*, nor evil, but with vast dispositions and potentialities within himself. His sinfulness was now to be seen in a more dynamic way; not as part of his corruptible material self, but in the context of his human situation. Religion had to see that repression and suppression of man's evil thoughts could not purify him—man, too, would have to know something about the inner recesses of the heart.

Sin, in this context, becomes the imperfect relationship between man and his world. It results from the fears, the guilts, the hostilities, the imbalances of an insecure adult world and, in some measure, the repression of tradition.

It may, of course, be objected that the criteria of the sinfulness of man is being measured by a psychiatric yardstick. To some extent this is true. But are not nervous breakdowns due to unresolved moral problems? Where again shall we draw the line between spiritual and emotional health? Man needs psychiatry to help him accept his limitations, to understand them and no longer fear them; and he will need religion to help him transcend his limitations and direct him to fulfill the humanity within himself. Religion cannot but come to an acceptance of the newer insights about man since it is given a more realistic understanding of the human problem. In another sense, too, it can be said that psychiatry has restored the unmentionable word *sin* to our vocabulary—its clinical findings have only added to the Biblical conviction that "the heart of man is evil from the days of his youth". Accounting for sin is the first step in its purging.

In another area of religious thought psychiatry has added to our understanding. The problem of free will versus determinism has often been debated in the philosophies of religion. The Western religions have assumed man's innate freedom of the will. Whether it was called reason or spirit, man's free choice has been basic to Jewish and Christian thought.

Psychiatry, on the other hand, has sought to explain man's choices as determined by the unconscious. Our decisions are determined by "irrational" fears and hopes; it is the unconscious that makes our decisions for us, without an awareness on our part.

One might therefore point out here an absolute contradiction between religion and psychiatry.

Here we part ways—and it is in a basic aspect of religious thought that this purported parting takes place. For without free will there can be no responsibility and no conscious repentance which play so important a part in religion.

I would like to point out that the apparent disposition of psychiatry for determinism is only apparent. It is contradicted in the very method of psychoanalysis, which is a treatment for release; release from the bondage of the unconscious; liberation from the neurotic straitjacket which holds man fast. The very fact that psychiatrists believe that with the gaining of insight the patient could loose himself from the fixations of the past must indicate that freedom is possible. Otherwise neither psychiatrist nor patient are free to effect any kind of cure and would remain hopelessly muddled.

Moreover it is this aspect of psychiatry that carries with it positive elements that in religion we call repentance. The fact that man has within himself the capacity for problem-solving is basic to psychiatry and religion. "Insight" with its curative effects is but the psychiatric terminology for repentance. Psychiatry, as previously stated, has helped us understand that exhortation is not enough. We must understand the forces that block self-knowledge and therefore a change of conduct. We must understand the hurts and the wounds that cause man to be self-destructive, i.e. sinful. Through insight man can discover new vistas of growth for himself—a psychiatric truth that is the essence of free will and repentance.

The contributions of psychiatry to religion are not primarily in the cosmologic or the theologic; they are in the behavioral and the social. Yet in the more philosophic terms psychiatry has much to learn if it is to go beyond the clinical and the medical. What, for example, does it establish as the goals of life or the values of life? What meaning does it give beyond the attempts to create healthy, effective and well-adjusted human beings? Peace of mind is certainly a desideratum, but life is also the fulfillment of responsibility; the extension of care and concern and, above all, the commitment to the Higher. It is in this field that religion impinges on psychiatry in a realistic and even clinical sense. From religion and psychiatry man gains stability and security, the anchorage vital and necessary in our present-day world.

5713 Park Heights Avenue
Baltimore 15, Maryland

ANNUAL MEETING DATES

MEDICAL AND CHIRURGICAL FACULTY
APRIL 15, 16, 17, 1959

The Alcazar, Cathedral and Madison Streets, Baltimore

The 1959 Annual Meeting of the Medical and Chirurgical Faculty will again be held at the Alcazar in Baltimore, where the 1958 Meeting proved so successful with a registration of over a thousand.

The Committee on Scientific Work and Arrangements, of which Dr. Norman R. Freeman, Jr. is chairman, has arranged another interesting scientific program with many outstanding speakers, some of whom are the following:

- Dr. Edgar V. Allen, Mayo Clinic.
- Dr. Samuel P. Asper, Jr., Johns Hopkins Hospital.
- Dr. Ivan L. Bennett, Jr., Johns Hopkins Hospital.
- Dr. Herrman L. Blumgart, Harvard Medical School.
- Dr. Ralph F. Bowers, Veterans Administration, Memphis, will give the J. M. T. Finney Lecture.
- Dr. Evan Calkins, Massachusetts General Hospital.
- Dr. Thomas B. Connor, University of Maryland.
- Dr. William Dameshek, New England Center Hospital, Boston.
- Dr. Milton S. Eisenhower, President of The Johns Hopkins University.
- Dr. Harlan I. Firminger, University of Maryland.
- Dr. Horace L. Hodes, The Mount Sinai Hospital, New York.
- Dr. Charles A. Hufnagel, Georgetown University Medical Center.
- Dr. James T. Priestley, Mayo Clinic, will give the I. Ridgeway Trimble Lecture.
- Dr. Joseph E. Rall, National Institutes of Health.
- Mr. William Alan Richardson, President and Editorial Director of *Medical Economics*.
- Dr. Lawrence E. Shulman, Johns Hopkins Hospital.
- Dr. Lawson Wilkins, Johns Hopkins Hospital.
- Dr. Theodore E. Woodward, University of Maryland.

A Medicolegal Symposium is being arranged by Dr. Russell S. Fisher, chairman of the Joint Committee of the Medical and Chirurgical Faculty with the Bar Associations on Medicolegal Problems.

There will also be many exhibits, which it is hoped our members will visit, as these form an integral part of the Annual Meeting.

* * * * *

Business Meetings—Wednesday morning, April 15, and Friday afternoon, April 17, 1959.

Scientific Sessions—Wednesday afternoon and evening, April 15; all day Thursday, April 16; and Friday morning, April 17, 1959.

Woman's Auxiliary Meeting and Luncheon—Wednesday, April 15, 1959, Sheraton Belvedere Hotel.

Round Table Luncheon—Thursday, April 16, 1959, Park Plaza Hotel.

Presidential Dinner and Meeting—Thursday evening, April 16, 1959, Sheraton Belvedere Hotel.

* * * * *

MARK THESE DATES ON YOUR CALENDAR—PLAN TO ATTEND

APRIL 15, 16, 17, 1959!

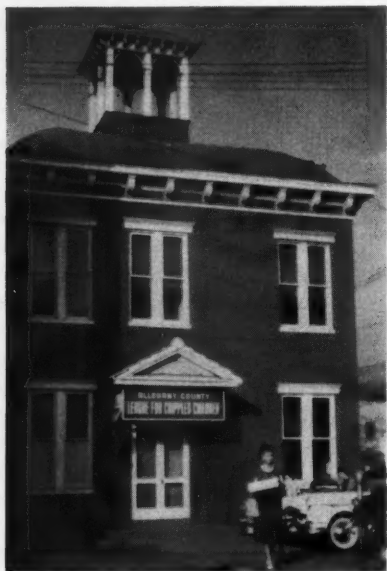
Component Medical Societies



ALLEGANY-GARRETT COUNTY MEDICAL SOCIETY

LESLIE E. DAUGHERTY, M.D.

Journal Representative



Allegheny County League for Crippled Children

The Allegheny County League for Crippled Children was incorporated in 1934. It is a service organization to help crippled children in Allegheny County. Its main support is from the sale of Easter Seals. Various charity organizations of Allegheny County also contribute to its upkeep. The county commissioners, through the collection of public taxes, contribute 500 dollars a year. The budget for one year approximates 27,000 dollars. A physical and speech therapist is employed through the state and county health department. A speech therapy department began in 1944.

Various services incidental to the work of the clinic, such as transportation to and from homes, public schools and parochial schools, are supported by the Allegheny County Board of Education. Reconstructive plastic clinics are held once yearly, while cerebral palsy clinics are held twice yearly and orthopedic clinics bi-monthly. The medical staff is composed of Baltimore physicians and surgeons.

The functions of the League are to hold clinics and to provide corrective appliances, surgery and medical care for disabled children. There are at present over 1000 patients under the care of the League. Last year (1957) 277 new patients were seen in the Clinic, while another 961 old patients were treated. Most of the surgery is done in hospitals in Baltimore City. Plastic surgery has the largest backlog of patients, with a waiting list of more than 30 children. An extreme need for a plastic surgeon in Allegheny County presents itself.

Occupational therapy is a needed service in the League, and efforts to that end have been instituted.

MEDICAL-SURGICAL CHEST DISEASE CONFERENCE

The first winter meeting of the Medical-Surgical Chest Disease Conference was held at the Memorial Hospital in Cumberland. Case presentations and discussions included coronary arteriosclerosis, with its medical aspects, discussed by Dr. Samuel M. Jacobson. Surgical approaches of revascularization were summarized by Dr. Calvin Y. Hadidian.



Drs. Calvin Y. Hadidian and Samuel M. Jacobson

"It is an experimentally proven fact that uneven distribution of oxygenated blood produces electrical instability, fibrillation and death, resulting from the creation of oxygen differentials. Surgical measures are intended for (A) re-distribution of the heart's own blood by the production of inter-coronary arterial communications and (B) addition of blood from extra-cardiac sources. It is generally agreed that the heart resists the latter and that the stimulation of inter-coronaries is the main means by which surgical measures aid a diseased heart."

The various surgical measures of revascularization were discussed. It was pointed out that the modified Beck I procedure of phenol de-epicardialization,

sprinkling of asbestos or talc, and cardio-pneumo-pery appears to give best results and with a reasonably low mortality and morbidity. A case of the use of Thompson's procedure of poudrage was presented.

PERSONALS

Dr. R. W. Trevaskis is a surgical patient in the Cumberland Memorial Hospital and is recovering nicely.

Dr. Frank T. Harrat, Frostburg, returned to his office in November after undergoing surgery at Miner's Hospital.

Dr. Ralph A. Reiter has resigned as consultant in the Allegany County Health Department program.

The Maryland Division of the American Cancer Society honored Dr. Benedict Skitarelic, of Cumberland, by presentation of a plaque for his services to the organization in 1958.

* * *

Every man owes some of his time to the upbuilding of the profession to which he belongs.

—Theodore Roosevelt

BALTIMORE CITY MEDICAL SOCIETY

CONRAD ACTON, M.D.

Journal Representative

The Baltimore City Medical Society had its second meeting of the current year on Friday, November 7, in Osler Hall. The president and vice-president of the St. Mary's County Medical Society, Drs. J. Roy Guyther and William H. Patrick were introduced by President Whitmer Firor as the official guests of the evening. President Firor then reversed the usual order of business and proceeded with the scientific session first. The scientific portion of the program was sponsored by the Section on Internal Medicine and President Firor called on Dr. John Eager Howard of that section to introduce the speaker. Dr. Howard gave a brief review of the early steps in the development of our knowledge of adrenal function as a prelude to his gracious introduction of Dr. Frederick C. Bartter of the National Heart Institute, National Institutes of Health, Bethesda, Maryland.

Doctor Bartter's topic was "Syndromes of Aldosteronism, Their Diagnosis and Management." In an easily flowing manner, with helpful slides and charts, Dr. Bartter held closely to his assigned topic. He first described the tests for aldosterone levels. These are biologic tests measuring potassium loss or

sodium retention in blood and urine clearance studies. Then, as clinical syndromes, he described the three known stimuli for aldosterone production: A) ACTH; B) potassium loading or sodium restriction; and C) hydration with waterloading plus pitressin. As to the treatment of aldosterone syndromes, he would only commit himself to a recommendation that if there was excess aldosteronism associated with hypertension, then total ablation of the adrenals should be done. Following the address, he answered several questions at some length.

After the scientific section there was a brief business meeting. New members were elected by written ballot. The recommendations of the Nominating Committee for officers for the coming year were presented by Dr. Lewis Gundry, chairman. On call by President Firor for nominations from the floor, Dr. Raymond C. V. Rangle placed in nomination an alternate slate of officers and representatives to the Executive Board.

President Firor reminded the members of the very fine insurance plan presently available only to the members, and available without any medical examination, provided a sufficient number subscribe to it within the set time limit. It seems regrettable that less than half the required number have subscribed so far. The list must close by December 31, except for those who may become new members of the Society and are eligible for inclusion in the plan for a short time after their joining.

President Firor also directed attention of the members to a new clinic for the study of advanced breast cancer. This is to be established at the Hopkins Hospital. The directors are anxious to obtain for study purposes as many individuals with this condition as can be induced to register with it.

The meeting of the Baltimore City Medical Society was then adjourned and was followed immediately by the annual meeting of the Maryland Society for Internal Medicine.

* * *

The Executive Board had its second meeting of the season on October 14, 1958, the new meeting time being the second Tuesday of each month. Chiefs and secretary-treasurers of several sections were there.

A persuasive presentation of a new group life insurance plan by the New England Mutual Life Insurance Company's representative started things going. He stated that his plan was much better than

the prior plan, if only because it wouldn't blow up on us if the going got rough. He was emphatic that benefits available here were the only way that people could get them. Not any 600 could get them, only the 600 physicians. He urged that the Woman's Auxiliary push membership to get the required 600 to start it without any medical examination whatever.

A special meeting to consider the Baltimore City Hospitals' private practice of medicine had been cancelled, due to the request of the chairman of the committee, Dr. John T. King, Jr. because he had not had time to obtain sufficient data.

Dr. Kimberly read the financial report and suggested that professional investment counsel should be employed to guide us in the best use of surplus funds. He felt that these funds could be invested in such a way as to maintain their purchasing power in the face of inflation. The Board voted to employ investment counsel for its funds.

Discussion regarding the inclusion of the chiefs of sections as members of the Executive Board followed the lines of prior discussions. It was pointed out that there are 13 sections in all, and if the chairmen and secretary-treasurers are included, it would add 26 to the 11 elected members of the Board. Thirty-seven members was felt to be unwieldy. The By-laws seemed to direct against such an action, as they call for election of the Executive Board from the whole Society. The question of consecutive tenure was raised. Section chiefs are elected for one year whereas the members of the Executive Board serve for two. Also, the possibility of restricting information in such a large group was questioned.

President-elect Dr. Whitehouse said that he saw no real need to enlarge the Board. He felt that it would make it too cumbersome, and that the various sections were well represented in the elected membership of the Board.

It was brought out that section representation on the Board was largely a matter of chance selection by the Nominating Committee. It was also pointed out that a broader base of Society representation on the Board would tend to overcome the charges that Board membership results from cliquing and nepotism.

Regarding the question as to whether the Board's minutes were public or restricted, Dr. Paulson, chairman of the Constitution and By-laws Committee, said he did not know how they were considered.

It was the feeling of the Board that they should be restricted. Interested individuals could obtain through the secretary information on specific questions but to throw the minutes open to all members of the Society was felt to be against the Society's best interests. It was argued that since the Society had delegated responsibility for conduct of its business to the members of the Executive Board, the Executive Board must accept these responsibilities and the Society must let them stay delegated. The discussion was in general very good natured. The members of the sections who were there seemed to be quite willing to come when invited, if they could receive some notice about what subjects pertinent to their sections would be discussed by the Executive Board. It was voted that the president should invite interested section chiefs to Executive Board meetings when he believed they would be involved in the discussions.

Dr. Gallant, chairman of the Section on Neuropsychiatry, was asked to comment on medical hypnosis as advertised by David Elman. The Society had written to Mr. Elman requesting the omission of the word *medical*. A recent barrage of advertising from Mr. Elman still continues to use the word *medical*. Dr. Gallant said he was not conversant with this matter, but had discussed it with Dr. Harold Rosen, who said that the teaching of hypnosis to doctors by laymen was most regrettable. The Board decided to call the attention of the Faculty and the A.M.A. to this matter and consult as to the best means of proceeding effectively.

The Board adjourned after tabling until next year the suggestion by an investors' group that group savings by the members might be a very profitable venture. It was felt that the Jenkins-Keough Bill might indeed, if passed, provide an incentive for physicians to put aside a regular amount of their income in such a savings plan.

* * *

The Executive Board of the Baltimore City Medical Society had its November meeting on Tuesday the eleventh and a number of considerations interesting to the members at large were brought forward.

John Sargeant, executive director of the Faculty, asked for a list of doctors qualified in various specialties to whom inquiries from the public may be directed. The Society membership will be polled to provide him with such a list in the near future.

A letter from Dr. M. B. Levin requested that an arrangement be provided for absentee balloting. This was considered more properly a matter to be brought up at a business meeting and he was so notified.

Dr. Albert E. Goldstein wrote concerning the status of the Urology Section of the City Society. There seemed to be some confusion as to whether it had actually ceased to exist or not. Other sections have, through inactivity, become inarticulate, but cherish their organization skeleton, nonetheless. The Society minutes are to be searched for facts. No section is considered disbanded without formal action of the Executive Board, just as none is officially created without formal action, even though active function may cease. The Constitution and By-laws Committee may shed some light on this.

A committee, headed by Dr. Hanford H. Hopkins, to study ancillary services reported on two activities. With regard to establishing a collection bureau the action was favorable. The information of this bureau is prompted by the public relations aspect. Most of the grievances heard by the board have to do with unsavory methods used by commercial collectors. In some other communities the official medical organization has successfully established a collection bureau with benefit to both public relations and the doctors. Such collection bureaus are usually self-supporting. The Executive Board feels that in order to become independent at the start, one or more large sponsors will be needed. Two of the larger hospitals were approached and their response was most gratifying. It was agreed that sufficient progress had been made to warrant bringing it up at a business meeting. The full cooperation of all members, as well as their full understanding of what is to be done, is needed for the success of the plan.

The other report by Dr. Hopkins had to do with the question of a bulletin for the Society. It was moved that this subject be tabled.

A matter of principle was discussed upon the request by the Faculty for 600 dollars. This sum was to be contributed toward the purchase of a folding and stamping machine for the Faculty. It was to be in addition to the annual rental agreement just entered into. That such a machine was needed, that it would save several employee work days per month, and that it would be an added facility for the City Society's use was not questioned. The Board opposed such an agreement, however, because the

increased rental was to cover the usage of the building and its various facilities. It was felt that if additional levies are to be requested, especially so soon after the institution of the new relationship, there was no telling where they would stop. Enumeration of the rental terms in writing was urged, so that both the Faculty and the Society would know exactly what is covered. In view of the manifest intention expressed at the Semi-Annual Meeting toward physical separation of the Faculty and the Society, the need for firm understanding is apparent. Obviously these matters need to be threshed out and reduced to plain and unmistakable terms. The time may not be too far off when the City Society itself will see the advantage of having its own, completely separate establishment.

The Baltimore Claims Management Council wrote regarding what it considers excessive fees for professional services. Mr. Mount, the executive director, was referred to the Medical and Chirurgical Faculty Committee which is at present concerned with some aspects of this problem. A committee from the City Society to work with the Faculty Committee may be appointed.

A new resolution submitted by Dr. Samuel Morrison goes a step further than his last one in protesting against irksome, arbitrary features of hospital accreditation. The Executive Board felt that it was not in its jurisdiction to approve or disapprove Dr. Morrison's resolution or methods of procedure.

CARROLL COUNTY MEDICAL SOCIETY

JULIUS CHEPKO, M.D.

Journal Representative

In his new capacity as president of the Carroll County Medical Society, Dr. W. Glenn Speicher opened the regularly scheduled meeting on March 5, 1958, with a warm welcome to members of the Carroll County Memorial Hospital Committee, who were guests of honor.

Recognition was given to numerous Carroll County and Reisterstown area individuals who were, in a large measure, responsible for the completion of the highly successful financial drive, which netted more than a million dollars for the proposed hospital.

By way of enlightenment as to the functions and role played by a small hospital, eminent medical and surgical physicians from Maryland presented their ideas and viewpoints. Dr. Warfield M. Firor, leading

surgeon of Johns Hopkins Hospital, emphasized the role of a hospital in a community. He urged time and caution in completing all plans for a hospital. Drs. Theodore Woodward, Richard Dalrymple and Edgie Russell pointed out the advantages of a small hospital to a community like Carroll County.

Atlee Wampler, local business man, paid tribute to Dr. C. L. Billingslea's past 25 years of devotion and his present assistance with the committees working for the hospital.

At the May meeting of the Carroll County Medical Society, Dr. Ruth Baldwin of Spring Grove State Hospital gave a brilliant and informative talk on "Seizures and their Therapy". Dr. Baldwin classified the seizures into five groups, ranging from convulsive to diencephalic. Classical treatment and recent innovations to therapy were elaborated for each type of seizure.

On September 3, 1958 the Carroll County Medical Society was host to the architects and consultants for the proposed Carroll County Memorial Hospital. The various facilities for the hospital were discussed and plans were made to meet the needs of the community.

Dr. Robert Pilgram of Frederick gave an interesting speech on euthanasia.

The last meeting of 1958 was held at Hoffman's Inn on November 8. The final architectural plans for the proposed memorial hospital were discussed. It was made known that construction on the project would get underway in the spring of 1959.

Dr. T. Nelson Carey, eminent internist of Baltimore, was the speaker. His subject was "Diabetes". This he presented in a stimulating manner and lent informality to the afternoon by answering the questions of the group.

FREDERICK COUNTY MEDICAL SOCIETY

LOUIS R. SCHOOLMAN, M.D.

Journal Representative

The regular meeting of the Society was held October 21 at the Peter Pan Inn, Urbana. The steaks served were tender and juicy. They were so carefully prepared that one could readily differentiate between those medium and well done.

The guest speaker was Dr. Charles Van Buskirk, Clinical Professor of Neurology at the University of Maryland Medical School, who spoke on "Functional Return Following Brain Damage." He presented new concepts of origin and management of cerebral control of motor function which were most stimulating. It certainly emphasized to most of us the number of years since we were exposed to "basic neurology."

HARFORD COUNTY MEDICAL SOCIETY

FREDERICK J. HATEM, M.D.

Journal Representative

The Harford County Medical Society met on Thursday, October 23, 1958 at the Bayou Restaurant in Havre de Grace.

Dr. Louis E. Kahan was accepted as a member of the Harford County Medical Society on transfer from the Baltimore City Medical Society. Dr. Kahan now resides in Edgewood, where he is doing general practice.

Following the usual excellent dinner and a routine business meeting, Dr. George F. Finney talked on the diagnosis and treatment of breast lesions. Dr. Finney stressed the importance of adequate examination in both the sitting and prone positions.

TALBOT COUNTY MEDICAL SOCIETY

JOHN N. ROBINSON, M.D.

Journal Representative

The Talbot County Medical Society were hosts to the tri-county meeting on October 23 at the Chesapeake Bay Yacht Club in Easton.

We were honored to have as our guests, Dr. J. Sheldon Eastland, president of the Medical and Chirurgical Faculty, and John Sargeant, executive secretary.

Dr. Edwin Rudzika, formerly a member of the Anesthesia Department of the Lahey Clinic and now chief of the department at the Easton Memorial Hospital gave a very interesting talk on the general and specific problems encountered in his specialty.

We were pleased by the large attendance at this meeting.



Obituaries



John Sebastian Derr, M.D.

1882-1958

Dr. John Sebastian Derr, aged 76, who practiced medicine in Frederick as a roentgenologist and physiotherapist during the last 32 of his 52 years as a doctor, died suddenly October 23 at his home of a myocardial infarction.

Dr. Derr was born at Norfolk and attended school in Virginia. He received his M.D. degree at the University of Virginia in 1905. He taught anatomy there for one year and then practiced as a medical missionary in Nigeria two years. Upon his return to the United States, he interned at the House of the Good Samaritan in Boston one year and spent the next year as an assistant in the Roentgenology Department of the Johns Hopkins Hospital. In 1911 he moved to Atlanta, Georgia, where he introduced roentgenology.

Dr. Derr served in World War I, entering as a lieutenant in 1918. He was roentgenologist with Base Hospital No. 3 and was discharged as a major in 1919.

In 1926 he returned to Frederick, his boyhood home, where he practiced roentgenology and physiotherapy actively until his death.

Dr. Derr wrote numerous papers on roentgen diagnosis and therapy from 1942 to 1953. In addition he managed a large farm at his home "Dear-bought." He enjoyed trap shooting and once won the state title in Georgia.

Dr. Derr was a vehement, colorful figure. On the street he was easily identified by the cigar jutting

out at a cocky angle and his staccato walk. He will be missed not only by his widow, son and three daughters but also by his fellow Frederick Countians and his colleagues.

L. R. S.

Frank J. Geraghty, M.D.

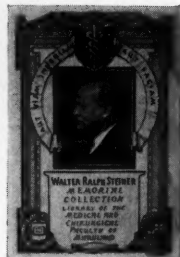
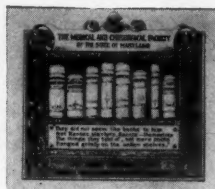
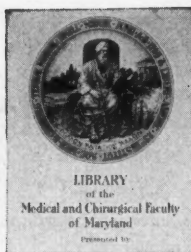
1898-1958

Dr. Frank J. Geraghty, staff president and chief of medicine at Bon Secours Hospital, died November 1. He was 60 years of age. He had been assistant professor of medicine at the University of Maryland Medical School and was on the staff of University, Union Memorial, Mercy and St. Joseph's Hospital.

Dr. Geraghty was born in Baltimore and was educated at Loyola High School, Loyola College and the University of Maryland Medical School.

He was a Fellow of the American College of Physicians, a diplomate of the American Board of Internal Medicine and a member of the advisory committee for medical care of the Baltimore City Health Department. He was a past president of the Baltimore City Medical Society and served on its executive board, as well as a member of the Medical Committee of the Maryland State Planning Commission.

He is survived by his wife, Frances, a daughter, Kathryn, and two brothers, Dr. William R. Geraghty and James T. Geraghty.



Library

Louise D. C. King *Librarian*

"Books shall be thy companions; bookcases and shelves,
thy pleasure-nooks and gardens." *Ibn Tibbon*

MEDICAL LIBRARY ASSOCIATION REGIONAL GROUP SECTION

Md., D.C. & Va.

Two of your librarians attended this meeting on October 18, 1958, held in the beautiful new building, Newcomb Hall, of the University of Virginia. Miss Adkins, librarian of the University of Virginia Medical School was hostess and gave the 66 registrants a wonderful meeting, amid lovely scenery, in the historic and charming University, beloved by all who have come in touch with it, however casual the contact may have been.

The morning was given over to a panel discussion of the new interlibrary loan policy of the National Library of Medicine. Since this affects all doctors who may wish to consult a journal or textbook not available locally, we thought you might be interested to know that all loans are made through libraries only, and that whenever possible, they will send a photostat rather than the volume itself. For this reason it is important that you are sure of the accuracy and completeness of your reference. All journal articles must be verified and if you are interested only in a page or two of a text, these and the subject matter must be specifically stated. Should you obtain photostats, they will be your permanent property and will cost you nothing; should you need, or the library decides to send, the volume itself, you will pay for the return postage and insurance only. The policy is most liberal, a great boon to the busy man who is unable to take the time to go to Washington to consult the literature he may need. We should be grateful for the dispatch of the

service which usually takes about one week. The collection is catholic in scope and you should be able to procure anything you might need, however obscure. One must bear in mind, however, this is a service and not wait till the last minute to obtain the material. A day or two's service is not possible with their work load.

After lunch, Colonel Rogers, director of the National Library of Medicine, gave a delightfully informal talk on his trip to Vienna-UNESCO and Geneva-WHO. We can not give you here all of his impressions and comments, but we thought you might like to know that in Vienna one goes one day to give the title of the book desired and comes back the next day for the volume requested; organization for quickly obtaining information is apparently rare. He also spoke of the paucity of some libraries which have had to start from scratch; some because of change in nationality, division or the results of war in general. Possibly for financial reasons, the University of Vienna makes an effort to acquire medical books in the German language only and we got the impression Colonel Rogers felt there was no library in Austria analogous to the National Library of Medicine.

It has occurred to us that a subscription for a year or two to one of our journals or a copy of the book you have just published given to a library, a physician or to a hospital of your choice, would be an excellent way to start the New Year. If you have no particular place where you would prefer to send such a gift, we will be very glad to make inquiries as

(Continued on page 35)



Maryland SOCIETY OF PATHOLOGISTS INC.



PAUL F. GUERIN, M.D., *President*

ROBERT D. SOLOMON, M.D., *Secretary*
Sinai Hospital, Baltimore 5, Md.

ANTIBIOTICS AND METHODS OF EVALUATING SUSCEPTIBILITY

There have arisen with the development of antibiotic and chemotherapy many difficult problems relative to the preferred or reliable technics used to determine the susceptibility of the organism causing the disease. The pneumococci, and beta-hemolytic streptococci of group A, are now known to be uniformly sensitive to certain antibiotics and do not become resistant. On the other hand there are various strains of *Micrococcus* (*Staphylococcus*) *pyogenes* with widely different susceptibilities so that it is usually necessary to determine which antibiotic is most effective for therapy for each strain. This applies also to the various genera of Gram negative bacilli such as *Aerobacter*, *Escherichia*, *Proteus*, *Pseudomonas* and *Salmonella*.

Most of the methods used for this determination have inherent limitations of one type or another. Some are simple, easily performed, but the results are irregular or unreliable. Others may be more precise but are also so complicated or detailed that a moderate sized laboratory cannot perform them on all the specimens available. The alert microbiologist soon learns that certain organisms are more likely to be inhibited by certain antibiotics so that adequate screening may usually be done early with a minimum number of tests. A final precise answer, however, may require the testing of a wide variety of drugs including some not ordinarily considered likely to be useful. Most hospital bacteriology laboratories receive more requests for antibiotic sensitivity testing of bacteria than can be done satisfactorily. This overload can be reduced by the recognition of the lack of need for sensitivity tests on bacteria of uniform susceptibility to certain antibiotics and correction of such diffuse approaches to therapy as "please culture and do sensitivity tests on predominant organism".

The extent of the testing procedure required must be determined by consultation between the clinician who knows the patient's need and the pathologist who knows the technical procedures. No one method of procedure is uniformly useful or accurate and practical for all situations and institutions. It is the responsibility of each laboratory to determine what methods are accurate, economical and best suited to its facilities of media, time, equipment and personnel. The pathologist should then discuss with the clinician the interpretation to be made of his findings in order that the patient can receive the most effective and economical antibiotic agent.



The Heart Page

Gordon Walker, M.D. - Coeditors - Robert Singleton, M.D.

A SERVICE OF

THE HEART ASSOCIATION OF MARYLAND

RHEUMATIC FEVER CONTROL

In late November the Maryland Rheumatic Fever Committee made a change in its recommendations for the treatment of acute streptococcal infections. Although this change may have been brought to your attention through other media, it might be appropriate now to review the role of the physician and the patient in the prevention and treatment of rheumatic fever.

The scientific basis of our program of prevention and treatment stems from our knowledge of the disease process itself. Although many years of concentrated research have failed to uncover the precise relationship between the streptococcus and its role in the production of rheumatic fever, it has established the association of rheumatic fever and previous infection with group A beta hemolytic streptococci. It has been estimated that approximately three per cent of untreated streptococcal infections are followed by rheumatic fever. It is also well established that rheumatic fever is a recurrent disease and recurrent attacks are precipitated by infections with group A streptococci. Thus it can be seen that a program of prevention divides itself logically into two parts. The first part, primary prevention, is aimed at averting the first attack of rheumatic fever through adequate treatment of streptococcal infections. The secondary program is concerned with prevention of a recurrence of rheumatic fever by preventing further streptococcal infections in those patients who have had rheumatic fever.

The recent recommendations of the Rheumatic Fever Committee of the Maryland Heart Association are concerned with the treatment of streptococcal infections. Although the changes are minimal, full advantage should be taken of the opportunity to provide the best known treatment for your patients.

Penicillin is the drug of choice for treating streptococcal infections. When streptococcal infection is diagnosed clinically or even suspected, treatment should be instituted immediately. This applies

especially to patients who have had rheumatic fever and to members of families susceptible to rheumatic fever. Treatment should provide a minimum of ten days protection and should be given according to the following table:

Type of Penicillin	Dosage, Adults	Dosage, Children
Intramuscular, Combination of 600,000 Benzathine G, 600,000 Procaine	one injection protects for full 10 days	one injection protects for full 10 days
Procaine with aluminum monosterate in oil	600,000 units every three days for three doses	300,000 units every three days for three doses
Phenoxylmethyl, Penicillin V or any oral buffered penicillin	200,000 units four times a day for ten days	200,000 units four times a day for ten days

The secondary prevention program has probably received the most publicity. Statistics reporting the success or failure of various schedules may be misleading or unreliable. The first requisite for participation in such a program is a diagnosis of previous rheumatic fever. Since the symptoms of rheumatic fever are nonspecific, there are undoubtedly many "rheumatic fever patients" carried on the rolls of secondary prevention programs who have never had rheumatic fever. The validity of the statistics concerning the recurrence of rheumatic fever is likewise subjected to the accuracy of the initial diagnosis. When the effectiveness of a prophylaxis program is evaluated, it should be done by weighing general trends and gross findings rather than percentage points.

The success of prevention or treatment programs requires the intelligent guidance of the physician

(Continued on page 35)



Blue Cross - Blue Shield



THE NATIONAL ORGANIZATION OF BLUE SHIELD

DENWOOD N. KELLY*

There are now 66 Blue Shield Plans operating in the United States, Hawaii and Puerto Rico, with a total of over 39,500,000 subscribers. Their activities are coordinated through a strong voluntary national organization known as "Blue Shield Medical Care Plans, Inc.", with offices in Chicago. Its purpose is "to promote the establishment and operation of such non-profit, voluntary, medical society approved medical care plans as will adequately meet the health needs of the public and maintain the high quality of medical care rendered by the medical profession". The foregoing quotation is from the By-Laws of the organization, which go on to say, "In achieving this purpose, the Corporation will seek to advance the health and welfare of the public by coordinating the methods, coverages, operations and enrollment policies of its several member Plans. Inherent in this purpose is recognition that state and local Plans are and should be autonomous in their control and operation in order that the needs, facilities and practices of their respective areas can be given due consideration."

The member Plans are divided into nine districts, for purposes of regional coordination and for the election of district directors. Each district elects a chairman and such other officers as may be desired for district level organization. More important, each district elects two members of the Corporation's Board of Directors, thus insuring adequate regional representation on so important a body.

The Board of Directors not only performs such duties as are required by law and customary practice, but also provides through its various committees valuable consultative, educational, coordinating, research and planning services for the member Plans. The 27 member Board consists of district directors and directors at large, elected in the following manner:

- (1) Two directors from each district, who serve one year terms and one of whom must be a doctor of medicine who has practiced at least five years, and who is a member of the governing Board of the member Plan. (The other district director is

usually the chief salaried officer of one of the Plans within the district.)

- (2) Nine directors at large, who serve three year terms and two-thirds of whom must be doctors of medicine. Three of these directors are appointed by the American Medical Association, and the other six are nominated and elected by the members of the Corporation.

It is expressly understood that no directors shall receive any remuneration for their services; they may be reimbursed for actual expenses incurred in the performance of their duties, but may incur no personal profit therefrom.

In addition, Blue Shield Medical Care Plans has an Executive Vice-President who is the chief salaried executive of the Corporation and who heads a salaried staff of about ten persons.

Membership in the Corporation falls into two categories, active and associate. The active members are those Blue Shield Plans which comply with certain strict minimum standards for membership and which are approved by the Board each year. Associate membership may be granted to any non-profit Medical Care Plan which is in the process of organization, upon approval of its application by the Board. Voting rights are vested only in active members, weighted on the basis of one vote for each ten thousand subscriber contracts, or fraction thereof, in force by each Plan.

The minimum standards for membership, or as they are frequently called, "approval standards," are those conditions which must be met each year by a Plan in order to continue the use of the term "Blue Shield" and its insignia, as well as to retain active membership in Blue Shield Medical Care Plans. These minimum standards include, among other requirements, that a Plan must have the approval of the state or county medical society in its area of operation; that it operate on a non-profit basis; that it impose no regulation restricting free choice of physicians by its members; that a minimum of 51 per cent of the practicing physicians in the area participate in the Plan; that there be no abridgement of the professional relations between patient and physician because of Plan operations; that its organization and operation shall be such as to provide the greatest possible services to its subscribers; that it have adequate financial responsibility; that it

* Assistant Director, Maryland Medical Service, Inc.

maintain, as a part of its regular organization structure, an active program of professional relations including (1) an annual report of its operations and progress to the governing board of its medical society; (2) that it maintain committees of doctors of medicine for the adjudication of individual medical claims as well as for the regular review and modification, as necessary, of fee schedules and claims administration policy; and (3) publishing a physicians' manual including its schedule of benefits and other necessary basic information.

Some of the most important direct benefits that

Plans derive from membership in the Corporation stem from the various committees which have been formed to render assistance of all types to the Plans. These Committees are staffed by Plan personnel, augmented as necessary by experts in particular fields. They render specific assistance to individual Plans, upon request, and also are instrumental in developing inter-Plan programs and research leading to increased operating efficiency and improvements in coverage.

The Directors, Officers and Standing Committees of Blue Shield's national organization for 1958-59 are:

BOARD OF DIRECTORS

<i>District</i>	<i>Trustee Director</i>	<i>Plan Executive Director</i>
I	Norman A. Welch, M.D. Boston, Massachusetts	W. H. Horton, M.D. New Haven, Connecticut
II	Louis H. Bauer, M.D. New York, New York	John F. McCormack New York, New York
III	Dwight V. Needham, M.D. Syracuse, New York	Donald R. Robertson Rochester, New York
IV	H. Thomas McGuire, M.D. New Castle, Delaware	D. T. Diller Harrisburg, Pennsylvania
V	Branham B. Baughman, M.D. Frankfort, Kentucky	Richard J. Ackart, M.D. Richmond, Virginia
VI	Russell Carson, M.D. Ft. Lauderdale, Florida	Sam M. Butler Columbus, Georgia
VII	William H. Howard, M.D. Hammond, Indiana	Charles H. Coghlán Columbus, Ohio
VIII	Percy E. Hopkins, M.D. Chicago, Illinois	Kenneth K. Clark Rockford, Illinois
IX	Ellery C. Gay, M.D. Little Rock, Arkansas	John J. Vance Denver, Colorado
X	Arthur J. Offerman, M.D. Omaha, Nebraska	Donald E. Eagles Fargo, North Dakota
XI	T. Eric Reynolds, M.D. Oakland, California	Joseph E. Harvey, Jr. Portland, Oregon

DIRECTORS AT LARGE

David B. Allman, M.D. (1961)* Atlantic City, New Jersey	James O. Kelley (1959) Milwaukee, Wisconsin
Henry S. Blake, M.D. (1960) Topeka, Kansas	Jay C. Ketchum (1960) Detroit, Michigan
J. A. Daugherty, M.D. (1961) Harrisburg, Pennsylvania	Dwight H. Murray, M.D. (1960)* Napa, California
George M. Fister, M.D. (1959)* Ogden, Utah	Donald Stubbs, M.D. (1961) Washington, D. C.
	Carlton E. Wertz, M.D. (1959) Buffalo, New York

* A.M.A. Appointee.

OFFICERS

Chairman
Vice Chairman
Secretary
Treasurer
Executive Vice President

Donald Stubbs, M.D.
Henry S. Blake, M.D.
Dwight V. Needham, M.D.
James O. Kelley
John W. Castellucci

STANDING COMMITTEES

Actuarial-Statistical-Underwriting Committee
Medical Advisory Committee to Actuarial-Statistical-Underwriting Committee
Enrollment Committee
Finance Committee
Government Relations Committee
Inter-Plan Transfer Committee

Membership Committee
National Advertising and Public Relations Committee

National Association of Insurance Commissioners Committee
Office Management Committee
Professional Relations Committee
Research Committee

Technical Assistance Board

The Heart Page

(Continued from page 32)

which will elicit the positive cooperation of the patient.

Because of many socio-economic factors involved, the needs of such a program in a rural environment differ from those of a metropolitan area and cannot be easily compared. There are, however, certain factors influencing the success of both programs. The cooperation of the patient depends largely on his understanding of the disease, the ease of prophylaxis and the availability of follow-up examinations.

The physician's cooperation is probably governed by the complexity or ease of reporting his findings, the amount of red tape involved in procuring medica-

tion and the latitude afforded him in selecting the drug of choice.

The cooperation of the physician is paramount to the success of either program. His attitudes and enthusiasm exert the greatest positive influence on the patient. The pooled resources of community agencies and medical schools cannot bring about success without the cooperative participation of the individual physician in the program of his local heart association.

*Robert T. Singleton, M.D.
1527 Langford Road
Baltimore 7, Maryland*

Library

(Continued from page 30)

to the locality where such material might be most needed.

Science is universal; it should have no nationality or political strings, but your contribution would serve a double purpose should it go to an area where British and American students or physicians are concentrated. Some of our boys still go to foreign

countries for at least part of their education, and our Armed Forces are far flung, not to mention our medical missionaries. Your choice is wide indeed and the outlay in time, trouble and expense is small compared to the benefit and pleasure you may be giving.

Health Departments

STATE OF MARYLAND DEPARTMENT OF HEALTH

Influenza Vaccination

In the light of information available September 7th, the Advisory Committee on Influenza made the following observations on October 7, 1958:

1. Based on current evidence, there is no reason to expect that we will have an exceptionally high incidence of influenza this winter; however, on the average an outbreak occurs about every other year.
2. The decision to vaccinate an individual should rest with the practicing physician.
3. Medical advisors to groups of employed persons should make their own decisions, as they have in previous years, regarding group vaccination to guard against absenteeism.
4. Medical directors of hospitals and nursing homes should consider vaccination of patients against influenza on an individual basis.
5. All influenza vaccine now available is of the polyvalent type and contains immunizing material against the important strains of influenza virus, including the Asian strain.
6. The effectiveness of the current polyvalent influenza vaccine is not definitely known. Its protective value is far from 100 per cent and the duration of the immunity conferred is relatively short, approximately six months.
7. A State-wide influenza vaccination program is not contemplated at the present time.

The State Department of Health approves the recommendations issued in September, 1957 by the Public Health Service concerning influenza vaccination among groups wishing to guard against absenteeism in their professions or occupations, and among those to whom the disease might be an added health risk.

The Service pointed out that there are now ample supplies of influenza vaccine of the polyvalent type, containing immunizing material against the important strains of influenza, including the Asian strain, and that vaccination should be planned before the fall season begins.

Dr. Leroy E. Burney, Surgeon General of the Public Health Service, said that while there is no

indication at present that widespread attacks of influenza will occur this fall and winter, there undoubtedly will be some influenza, and vaccination is a prudent measure for certain groups and individuals.

Dr. Burney stressed that practicing physicians should be the judges of whether or not to vaccinate individuals. He said groups which should be considered for vaccination include hospital staffs whose services are necessary to the care of the sick; groups living in close proximity where influenza could spread rapidly, such as institutions; industrial or service groups, big or small, in occupations where the sudden absence of a sizable part of the force would create serious disruption of the work; and individual patients or groups who have a special risk, such as the aged, the chronically ill, and pregnant women. This special risk group, Dr. Burney said, should be the special area of consideration for the private physician.

Perry F. Prather, M.D.

BALTIMORE CITY HEALTH DEPARTMENT

Tenth Anniversary of "Your Family Doctor" Television Series

On December 12, 1958 the City Health Department joined with the Medical and Chirurgical Faculty of Maryland in the celebration of ten years of continuous production of their jointly sponsored 15 minute weekly television series, "Your Family Doctor." This program, which is now seen on Fridays at 5:30 P.M. by thousands of persons in Maryland and surrounding areas, is the oldest continuous medical series on television. The end of 1958 saw the telecasting of its 516th program.

Dedicated to the improvement of personal and community health, the television series, like the "Keeping Well" radio series, jointly sponsored in similar fashion since January, 1932, is a striking illustration of the fine spirit of teamwork between the physicians of Maryland and the city government of Baltimore. This was so stated by Mayor Thomas D'Alesandro, Jr. at the initial telecast of "Your Family Doctor" on December 15, 1948. The accompanying photograph taken at the inaugural program shows the very first participants (left to



right): Dr. Charles W. Maxson, then president of the Faculty, Dr. Huntington Williams, Commissioner of Health, Mayor D'Alesandro, and Dr. Walter D. Wise, then chairman of the Council of the Faculty.

Through a variety of presentations—drama, panel discussions, demonstrations, lectures, films, and combinations of these—"Your Family Doctor" is believed to have contributed immeasurably toward better health in Maryland. In addition to making its local contribution, the television series has stimulated similar health programs on other television stations in the United States through the interest of visiting health officers and others and through study-tours by students in public health of the Johns Hopkins School of Hygiene and Public Health. In 1952

the program received an honorable mention award at the 16th Ohio State University Institute for Education by Radio-Television which complimented this program for "outstanding educational value and distinguished television production."

Production of "Your Family Doctor" is supervised by the Commissioner of Health with the assistance of Joseph Gordon, Director of the Bureau of Health Information of the Baltimore City Health Department and specialist advisors—physicians, health workers, and educators—many of whom represent governmental, voluntary and private health agencies. The family doctor is played by Robert M. Keller of the City Health Department's Civil Defense Health Service. Opportunity is also taken here to express gratitude to the many persons who have contributed their time to participate in program planning and production, and to the staff of WMAR-TV who have made the telecasting possible. It is our plan to continue the radio and television series and to bring to the people of Maryland accurate and authentic messages on health and medical care.

Huntington Williams, M.D.

Commissioner of Health

* * * * *

TRAINING PROGRAM IN PSYCHIATRY

The National Institute of Mental Health is offering grant support for a training program for general practitioners and other physicians engaged in the practice of medicine other than psychiatry. Funds are available during 1959 for these grants and training institutions may submit applications at any time.

The program has two purposes:

1. To foster the development of postgraduate training in psychiatry for the practitioners who wish to increase their psychiatric knowledge and skills in order to be able to deal more effectively with the emotional aspects of illness generally and in order to play a more effective role in the treatment and prevention of mental illness. These courses will be designed for the physician who plans to continue practicing in his own field.

Physicians interested in obtaining this type of training should apply to medical schools, hospitals, clinics, and medical or psychiatric societies which have, or are developing, such training opportunities.

2. To provide support at an adequate level for psychiatric residency training for physicians in practice who wish to become psychiatrists. Training stipends up to a maximum of \$12,000 a year are available. The level of payment will be determined by the training institutions who will also make the award to the individual physicians. The National Institute of Mental Health will make awards of grants for this purpose to training institutions and not to individuals.

Physicians interested in support for this type of training should apply to training institutions which are approved for psychiatric residency training.

Inquiries about the program should be sent to Dr. Seymour D. Vestermarck, Chief, Training Branch, National Institute of Mental Health, National Institutes of Health, Bethesda 14, Maryland.

Ancillary News

NURSING SECTION

M. RUTH MOUBRAY, R.N., *Executive Secretary,*
Maryland State Nurses Association

Journal Representative

THE NURSE TODAY*

THELMA INGLES

That today's hospitals present difficult problems is a fact as clear to nurses as to patients. That these problems have not been solved is NOT a result of indifference, or lack of caring on the part of nurses. On the contrary, the majority of nurses in practice today care a great deal because patient care is so often "not what it used to be."

Some of you may have read the vicious diatribe on nursing care which appeared in the July issue of *Harper's Bazaar* called, "Come Back, Florence Nightingale." Obviously, this plea was as futile as Shirley Booth's call for Little Sheba.

If it were possible to bring back Florence Nightingale, she would be lost in today's hospital. A firm disbeliever of the "germ theory", she would take a jaundiced look at our abundant use of inoculations, antiseptics and antibiotics; she would understand but a dozen of the hundreds of drugs currently dispensed on our medical wards; she would be overwhelmed by our long array of complicated diagnostic tests, and totally unprepared to care for patients with modern surgery.

Not only would Florence Nightingale be appalled by the vast amount of knowledge the nurse in 1958 must have in order to care for patients, but she would be even more shocked by the throng of people who participate in patient care. Today in our medical centers, many different doctors and nurses give care to a single patient. In addition, members of various other groups have a part: practical nurses, dietitians, technicians, physical, occupational and recreational therapists, social workers, hospital administrators, ward secretaries, nurses' aides, maids and orderlies.

* Presented by Miss Thelma Ingles, Associate Professor, Medical and Surgical Nursing, Duke University School of Nursing, Durham, North Carolina, during the Annual Convention of the Maryland State Nurses Association and Maryland League for Nursing, October 15, 1958.

Sometimes these groups actually seem to compete for their share of the patient, each seeing their particular detail of care as most important.

Many professional nurses today are unhappy with their role in patient care. The old satisfaction of being a good nurse, of personally comforting patients and helping them to feel better and to get better has become a rare experience. Too often nursing is a matter of running in and out, of doing necessary things periodically, rather than an act of giving any kind of sustained care. Patients miss the good old days when the nurse gave sympathetic and kindly support, and because the nurse once functioned in this way, they quite understandably turn their angry criticism upon her. The nurse, trapped in a changing system, has tended to resist this criticism and has become defensive. By her very defensiveness she has further antagonized patients and patients' families, making them feel that she is trying to justify existing conditions rather than correct them.

Perhaps the time has come, admittedly a little late, for the nurse to share some of her problems with the public, for society must inevitably play a part in their solution. Immature bouts of derision cannot help, for to be critical of effects is simple; to understand causes is difficult. However, only through understanding causes can successful solutions evolve. Let us then take a look at some of the causes.

There is much confusion today about the role of the nurse in general. In fact, we might say with MacDuff, "Confusion now hath made his masterpiece." We are confused about what we should know: how much science should we include in our curriculum, how much social science, how much medicine? Where does the professional nurse fit into the scheme of things between the practical nurse and the physician?

We are confused about how we should behave: has our image of the nurse as a stoical, well-controlled

person tended to make us seem cold, aloof, sterile to the patient? Should we bend a little, and if so, how much?

We are confused about what we should wear: should we join the lab coat brigade and ally ourselves with the physician, social worker, technician, or is there an advantage to be derived from maintaining the symbol of the nurse?

We are confused about our functions: should we attempt to develop competency in all areas of nursing care, or should we develop specializations? Is the social worker, dietitian, physical therapist encroaching on the functions of the nurse, or is the nurse to be seen as the encroacher on their areas?

All of this confusion makes life particularly difficult for the teacher of nursing. She is caught in the midst of so many uncertainties. She is trying to teach quality nursing in hospitals where, with staff shortages, only adequate care can be given. She is caught between her sense of responsibility to patients and to students, and she often feels guilty because her job requires her to give priority to students. She is criticized by students because they feel they are being "used" for service, by nursing service personnel, and by physicians because they feel her students are not contributing to patient care as they did a few years ago. She is frightened by the ever-increasing complexity of therapeutics. She is told by various groups that she must motivate and stimulate her students, that she must do more bedside teaching and that she must include body mechanics, incorporate nutrition, absorb pharmacology, stress public health, emphasize rehabilitation and integrate mental health. Because of the pressure of this widening horizon, she feels unsure of her role, and of her ability to handle her role. She is caught in the inexorable squeeze of a changing social system.

It might be interesting to look backwards for a few moments. What was the role of the nurse 20 years ago? Actually, she had a well-circumscribed role, with few areas of uncertainty. A distinct hierarchy of authority existed, from the ward maid up to the director of nurses. The physician-in-chief was granted ultimate prestige and his word as it applied to patients was accepted as final. The halo of his position was accepted all the way down the line. There was a certain security attached to being the handmaiden of the physician. The student was taught that a primary characteristic of the good nurse was her ability to anticipate the physician's

needs, to expedite his work. He told the head nurse that he wanted to do a lumbar puncture, and a nurse was assigned to assist him. She got the equipment, explained procedure to the patient, and arranged the equipment so that it would be most convenient for the doctor. When the doctor arrived, everything was in readiness for him... but, also, everything was in readiness for the patient. Efficiency produces a sense of well-being, and I am sure many patients derived comfort from this setting.

In the second place, the nurse 20 years ago gave a great deal of physical care to the patient. Patients stayed in bed a longer period of time and therefore required more care from the nurse. The bath was *given* to patients, plus frequent back rubs. The patient with pneumonia in the pre-antibiotic days needed the nurse. The pneumonia patient was a *sick* patient and elicited tenderness and compassion in the nurse. As she sponged this feverish patient she felt like a nurse and gained infinite satisfaction from her role. And patients benefited from this care, for in essence, this was a kind of anacletic therapy. The nurse really supported the patient as he fought the pneumococcus, and when she went off duty she had a feeling of worth. "I worked hard, but I helped my patients feel better." Although she may not have been aware of it, she helped her patients by giving both physical and psychological support, for giving a bath is more than giving a bath. The nurse gives something of herself; she gives warmth and lovingness and strength. The laying on of the hands is a potent and a sustaining force.

Now, let us look at these two nursing roles as they are seen in 1958. First, the role of the nurse with the doctor: I think in our great drive to be free and independent, we have lost sight of the fact that in large measure the role of the nurse *is* to help the doctor help the patient, as a large measure of the doctor's role is to help the nurse help the patient. We talk a great deal today about improving doctor-nurse relationships. I think we need to spend considerable time in examining this obvious fact. If we really focus on the patient we cannot see ourselves as subservient to the doctor.

Secondly, let us look at the role of the nurse with the patient. To be sure, early ambulation and antibiotic therapy have seemingly lessened the patient's need for physical care from the nurse. Instead of the comforting bedbath we hand the patient a towel and say, "Take a bath." Instead of the comforting

sponge we give the patient with pneumonia a shot of penicillin. Neither of these activities is very satisfying either to the patient or to the nurse.

I would like to digress a moment and tell a short story about a patient I saw a few months ago. This patient had had a biopsy the day before. She had previously had a radical mastectomy for cancer of the breast, and she knew the biopsy had been done because of the possibility of metastasis. When I walked into her room I found her lying in bed, sobbing. A bath basin was on the bedside table. She cried out to me, "I hate this hospital. I hate all of the nurses. They bring in the basin of water and say, 'Take a bath.' Nobody cares about how you feel." It seemed important for me to get some warm water and give her a bath. As I bathed her she poured out her story to me: "I am only 35 years old and I have two children. I don't want to die." Later, when I spoke with the charge nurse, she explained, "We have so many acutely ill patients on this ward that we simply do not have time to bathe patients who are capable of bathing themselves." I believe that perhaps more than any other patient on the ward this patient needed to have a bath given to her on this particular morning. There are times when patients need to feel dependent on the nurse, and it is just as important for the nurse to recognize this need as it is for her to recognize their readiness to be independent.

Now, clearly, I am not suggesting that such advances as early ambulation and antibiotic therapy are bad. I am suggesting, however, that we must not view them as substitutes for nursing care. We must begin to examine carefully how they have changed our role in patient care. To be sure, the care of a patient with an infectious disease is different than it was in pre-antibiotic days. Now we do give the patient a series of shots, whereas before the nurse gave good supportive care while the patient mobilized his body forces to fight the hostile bacteria. The nurse was seen by the patient and the patient's family as a helping person, and she saw herself as a helping person. Today the giving of penicillin may be very easily interpreted by the patient as a painful procedure and by the nurse as a doctor's order.

Today the patient with an appendectomy is gotten out of bed the morning following surgery and may very likely be expected to take his own bath. Although we may rationalize the modern method on the basis that it is scientifically better because it

prevents post-operative complications, the patient may see the whole ordeal as pretty severe treatment.

Again, rooming-in may be found by the new mother to be an exhausting experience. A few years ago the expectant mother came to the hospital, delivered her baby and had a week's rest. The baby, all clean and sweet, was brought in periodically for food and love. Today the mother with the crib by her bed, may get very little rest if the baby finds his new world an unhappy place.

It seems to me that we have not done a very good job of explaining changing medical practice and changing nursing practice to the public. We have been so concerned with our own pressures and our own confusions that we have forgotten that the poor patient doesn't always understand the "wheres and why-fors" of change. Our continuous use of the shortage of nurses as an excuse for what the patient sees as inadequate care does not appease him; it only antagonizes him. Consequently he complains to his physician; the physician complains to the nurses, and the nurses complain to their friends. This situation obviously creates an aura of dissatisfaction which permeates the whole environment.

I believe that the solution for our dilemma must start with better communication between the responsible physician and the responsible nurse: What is the purpose of the patient's hospitalization? What are the specific plans for his care? What are his physical and psychological needs? What is the ultimate goal? With common understanding and common goals right from the beginning, a proper nursing care plan can be set up by the head nurse. She then can decide which of her personnel is best equipped to handle the particular needs of this patient.

Secondly, I believe that it is very desirable for each patient to see one person as My Nurse, even though this nurse may see him but a half hour five days a week. This nurse could be the thread of continuity in his care.

Thirdly, I believe that the day must come when each hospital will have expert practitioners who can and will assume the role of nursing consultants. The number of these consultants will depend upon the size and needs of each hospital. The consultant will not be a person who makes a superficial visit on acutely ill patients to determine their condition at a given time; she will actually become involved in their care.

As I see it, one nursing consultant might be suffi-

cient in a small hospital, whereas a center might require several. For example, in a large center, there might be one consultant for patients with cardiovascular renal disease. If a patient with congestive heart failure, or acute glomerulonephritis, or a patient with post-operative heart surgery were admitted to a ward, the head nurse could put in a request for consultation. The consultant would go to the ward, evaluate the patient's condition and nursing care needs, and advise the staff as to the best procedure for care. She would also write out her recommendations so that all nurses might benefit from them. She would follow the patient for as long as seemed necessary, in order to add to or subtract from her recommendations. She would confer with the physician or surgeon periodically to be sure she understood his goals. She would be "on call" to head nurses when problems arose where her special skills might serve a useful purpose. Her services would be available to private duty and ward nurses, both professional and practical. She would pro-rate her time in the way which seemed best to her in terms of meeting patient-care needs. Inevitably, a large part of her role would involve staff education.

Today's medical practice has become so terrifically complicated that it is difficult for any one person, regardless of her education or experience, to be an expert in all areas of nursing care. Medicine recognized the need for consultation service many years

ago; it is time for us also to appreciate it and furthermore . . . to do something about it. I believe the proper utilization of such experts would up-grade all nursing care, and in consequence, the nursing profession.

I believe that this consultant would, in addition to serving a useful purpose as a consultant for patient care, discover areas where research is needed . . . specific avenues of research which relate to particular care. We need so much research in the details of nursing: What is the best method for bringing down a fever? Is an air-ring a help or a hazard? Does the kind of pre-operative care given have any effect on the post-operative course? Most nursing research going on now deals with large general areas, or with interpersonal relations. We still have a great deal to learn about the physical care of patients.

Fourthly, I believe we must take a very serious look at the many functions and activities now being carried on by the nurse, and seen as belonging to the nurse. If we see the nurse as primarily a ministrator, many of the details of administration can be given over to other groups.

Lastly, I suppose that the change nearest my heart at the moment is not really a change, but a reversion. I hope to see the time when there are no such separate entities as nursing education and nursing service. But that is another speech . . . and I'll give it at another time.

* * * * *

SAFE KEEPING OF MEDICAL CREDENTIALS

The services of a Central Repository for Medical Credentials became available July 1, 1958 to doctors all over the world. Many doctors today are unable to utilize their professional skills because of the loss or destruction of their original credentials. The World Medical Association undertook this program to assure that the doctor will always be able to prove himself medically trained and fully accredited to practice medicine.

Lifetime cost of this service to the newly graduated doctor in the United States is approximately \$60.00 on a one-payment basis. An actuarial schedule has been established for doctors in various age groups. A ten-year service rate is also available.

Repository officials suggest that the credentials deposited should include official medical school record, medical diploma and specialist credentials. Doctors should not send their original credentials, but should send photostatic, microfilm or notarized copies of their original credentials.

Forms and additional information are available from The World Medical Association, 10 Columbus Circle, New York 19, New York.



Woman's Auxiliary Medical and Chirurgical Faculty



MRS. DAVID S. CLAYMAN, *Auxiliary Editor*

INTRODUCING THE PRESIDENTS—

This is the first in a series of articles on County Auxiliary presidents. Featured this month is Grace Watkins, president of the Prince Georges County Auxiliary.



MRS. GRACE WATKINS

Grace has been active in the Auxiliary since 1946. She has served as corresponding secretary and as chairman of publications (*Today's Health and Bulletin*), program and publicity. She was elected president this past spring and we are happy to welcome her to our family of component auxiliary presidents.

Born in Wisconsin, Grace also lived in Iowa, North Dakota and Illinois before settling in College Park, Md. at the age of seven. She attended the local elementary school, Columbia Junior High School and Central School in Washington, D. C. Completing her studies at the University of Maryland, she received her MA in comparative literature.

For some years she taught general science and mathematics at Anacostia, in the District of Columbia. However, five daughters and six cats demand her time at home. Her eldest daughter is now a freshman at Goucher College, while her youngest is in the second grade.

Grace's hobbies are literature, cats, theater, camping, travel, ceramics and painting.

D. B.

FUTURE NURSES OF MARYLAND

REVISIONS COMMITTEE

On October 16, 1958, the Revisions Committee of the Future Nurses of Maryland met at the Medical and Chirurgical Building. This committee was composed of the 1958-59 officers from the Future Nurses of Maryland; Mrs. E. R. Shipley, president, Woman's Auxiliary to the Medical and Chirurgical Faculty; Mrs. Elizabeth Kinsey, school sponsor, Franklin High School; Mrs. Rosamond Pavone, school sponsor, Northern Garrett High School; and Mrs. D. Delmas Caples, chairman of recruitment for the Auxiliary.

Since much of the old constitution was out of content, it took quite some revising to get it into shape. A parliamentarian and a nominating committee were added. This revised constitution was submitted to the delegates the following day.

FIRST DELEGATES MEETING OF 1958-59

The first delegates meeting of the Future Nurses of Maryland for the year 1958-59 was called to order by the president, Karen Kinsinger, at 10:00 A.M. on October 17, 1958, at the Medical and Chirurgical Building. Jean Bransfield, vice-president, gave the invocation. This was followed by the president's welcoming the delegates and introducing the officers. President Kinsinger then introduced our guest parliamentarian, Mrs. Albert Goldstein.

The business meeting began with the roll-call of clubs by the recording secretary, Kay Strohm. Thirty-one clubs sent delegates. The minutes of the Sixth Annual Future Nurses of Maryland Convention were read and approved. The treasurer, Pat Friend, reported a balance of \$512 in the state treasury and announced dues for the year 1958-59 are due in December.

Our state project was then brought on the floor for discussion by President Kinsinger. A motion was made by Ann Weintrob of Forest Park High School that one hundred dollars be given to a foreign country for nursing school books (these books are

purchased through the Nurses Care Program and sent to the designated country). It was seconded by Brenda Bair of Milford Mill and passed by a two-thirds majority. Korea was the country to which the delegates voted to send the books.

The recording secretary, Kay Strohm, was then asked by the president to read the revised constitution of the organization. Some of the main revisions of the old constitution were: the officers, pins, dues, projects, amendments, and quorum were placed under by-laws. A nominating committee was included with standards for them to follow. Also, a parliamentarian was included with the list of officers. A motion was made by Mary Jo Rhodes of Boonsboro High School to adopt the new constitution and by-laws. It was seconded by Gloria Linebaugh of South Hagerstown High School. The motion was carried.

Nominations were asked from the floor for a parliamentarian. Judy Lowman and Ann Weintrob were nominated. Emily Doisch of Eastern made a motion that nominations be closed and it was seconded by Sandy Simpson. Ann Weintrob of Forest Park High was elected.

A nominating committee was chosen from the five districts of Maryland. They are as follows:

- Eastern—Brenda Kurth, Cambridge High School
- Western—Gloria Linebaugh, South Hagerstown High School
- Metropolitan Washington—Florence Spiegel, Montgomery Blair High School
- Southern—Paula Thobe, Brooklyn Park High School
- Central—Sherian Draper, Dundalk High School

A motion that each state officer receive a gift of a pin from the state treasury each year designating her as a state officer was made by Judy Lowman and was seconded by Lynne Shark of Western. The motion was carried.

Gloria Linebaugh of South Hagerstown High extended an invitation to the organization to hold the convention at South Hagerstown this spring. Emily Doisch made the motion that the convention be held at South Hagerstown High this spring. The motion was seconded by Hattie Jordan of Dunbar High. The motion was carried.

Kay Strohm, Franklin High School, discussed the possibility of the state group's paying for the stamps and envelopes of the Candlelight Express. Lynn

Sharp then made the motion for the stamps and envelopes of the Candlelight Express be paid for by the state treasury. Emily Doisch seconded the motion and it was carried.

A motion that the meeting be adjourned was made by Martha Meredith of Brooklyn Park and seconded by Marsha Leboe of Forest Park. The meeting was adjourned by the president at 11:30 A.M.

Following the meeting a movie, "Gateways to the Mind," was shown by the C & P Telephone Company.

Kay Strohm
Recording Secretary

EXHIBIT AT MARYLAND STATE TEACHERS MEETING

On October 16 and 17 the Recruitment Committee of the Medical and Chirurgical Auxiliary held an exhibit at the Maryland State Teachers Meeting at the 5th Regiment Armory.

Two pre-nursing students from the Future Nurses Clubs of Parkville High School and Catonsville High School assisted us, along with Mrs. John Mitchell and several members of the Baltimore City Auxiliary. For this big assist I am ever grateful as both mornings I also had meetings at the Med-Chi to attend. This exhibit was manned from 9:00 A.M. to 5:00 P.M. both days.

We believe it was very successful. Several hundred pieces of literature were given out on various paramedical careers. Also we took 60 other written requests for various booklets and pamphlets. Many of these were vocational guidance directors, teachers, nurses, and many students from Towson State Teachers College and Western Maryland College.

It is the feeling of this chairman that if more auxiliary members would participate in this program that it would be of great value to all. After all, don't every doctor's patients benefit from the services of the paramedical personnel recruited? Recruitment is everybody's responsibility.

Mrs. D. Delmas Caples

SOUTHERN MEDICAL CONVENTION

The 34th annual meeting of the Woman's Auxiliary to the Southern Medical Association was held in New Orleans, La., November 3-6 at the St. Charles Hotel. Mrs. Walker L. Curtis, who spoke so beautifully at our own annual meeting last spring, presided.

On Monday, November 3 there was a pre-convention breakfast meeting of the Executive Board, followed by a boat ride on the Mississippi River.

The General Session of the Auxiliary was held Tuesday morning. Greetings were extended from various members of the Southern Medical Association, the Advisory Council and the Louisiana State Medical Society, as well as from Mrs. George W. Owen, president-elect of the Woman's Auxiliary to the Southern Medical Association, and Mrs. E. Arthur Underwood, president of the Woman's Auxiliary to the American Medical Association.

Reports of the state councilors, officers and nominating committee followed. The report from Maryland was given by Mrs. Ross Z. Pierpont of Baltimore.

Mrs. Louis K. Hundley, past president of the Auxiliary to the Northern Medical Association, installed the new officers, after which Mrs. Curtis presented the president's gavel and pin to Mrs. George W. Owen of Jackson, Miss.

This meeting was followed by the Doctor's Day awards luncheon, where a Mardi Gras carnival was held. A tour of old homes and a tea filled the afternoon hours.

Wednesday morning there was a "Breakfast at Brennan's", honoring the past and new presidents. After a post-convention board meeting a bus tour of the city and tea at the Orleans Club were scheduled. Wednesday evening was "President's Night" and a delightful dinner-dance was held in the International Room of the Roosevelt Hotel. Dr. W. Kelly West of Oklahoma City gave the presidential address. Awards were presented for various scientific exhibits as well as trophies for golf tournaments.

I believe everyone who attended was in agreement that Southern Medical Conventions are always glamorous and great fun. Why don't you plan to go next year?

Mrs. David S. Clayman

REMINDER REGARDING RESOLUTIONS!

Important Notice for Component Medical Societies and Individual Members of Medical and Chirurgical Faculty

The House of Delegates of the Medical and Chirurgical Faculty approved the following recommendations concerning the procedure to govern the reports which are given at the Annual and Semiannual Meetings:

1. *All reports must be sent to the Faculty office. Those reports which contain recommendations or resolutions must be in the office eight (8) weeks prior to the Annual or Semiannual Meeting, whichever happens to be concerned.*
2. *When the reports are received, those containing recommendations or resolutions will be sent to the Component Societies for consideration so that the Component Delegates may be instructed if desired. These reports will also be referred to Council for discussion at its meeting prior to Annual or Semiannual Meeting.*
3. *Those reports which contain resolutions are to be referred to the Resolutions Committee for consideration.*
4. *The Council will refer to the Resolutions Committee any recommendations which it feels should be formulated as resolutions. The Council will also transmit to the Resolutions Committee an opinion of the policy involved in the Resolution.*
5. *Reports will be presented to the House of Delegates as usual, and it will be suggested as is normally done that reports not containing recommendations or resolutions be accepted as printed and distributed.*
6. *Those reports containing recommendations or resolutions will be considered and acted upon individually by the House of Delegates.*

This policy will be followed in all future meetings.

AS A RESULT OF THIS ACTION OF THE HOUSE OF DELEGATES, RESOLUTIONS FOR PRESENTATION TO THE APRIL 1959 ANNUAL MEETING OF THE HOUSE OF DELEGATES, MUST BE IN THE HANDS OF THE SECRETARY, DR. WILLIAM CARL EBELING, AT THE FACULTY OFFICE, BY FEBRUARY 18, 1959.

As adopted by the Council, the members of the Medical and Chirurgical Faculty are advised that the Resolutions Committee is anxious to hear expressions of opinions from members on any resolutions being presented to the House of Delegates at either the Semiannual or Annual Meetings, and that members in good standing who might wish to appear before this Committee to discuss a pending resolution may do so upon making a request to that effect to the Resolutions Committee.



NEWLY ELECTED OFFICERS OF THE MARYLAND ACADEMY OF GENERAL PRACTICE—Seated, left to right: Dr. Charles P. Crimy, Dr. J. Roy Guyther, Dr. Harry L. Knipp. Standing, left to right: Dr. Gordon M. Smith, Dr. Joseph S. Blum, Dr. Walter A. Anderson, Dr. Andrew C. Mitchell and Dr. William T. Layman.

* * * * *

MARYLAND ACADEMY OF GENERAL PRACTICE CELEBRATES TENTH ANNIVERSARY AT ANNUAL MEETING

Celebrating its tenth anniversary, the Maryland Academy of General Practice held its Annual Meeting and Scientific Assembly at the Hotel Alexander in Hagerstown October 11 and 12. It was in this city that the Maryland Academy held its first Scientific Assembly on September 29, 1949.

The largest attendance in this chapter's history was recorded for the anniversary meeting. About 70 per cent of the entire membership turned out.

Highlight of the meeting was the presentation of "The Physician of the Year Award" to Dr. Nathan E. Needle of Baltimore. Dr. Needle is a charter member and former president of the Maryland Academy of General Practice and is currently president of the Heart Association of Maryland.

The following officers and delegates were elected for 1959:

President: J. Roy Guyther, M.D., Mechanicsville

President-elect: Walter A. Anderson, M.D., Baltimore

Vice Presidents: William T. Layman, M.D., Hagerstown; Gordon M. Smith, M.D., Barnesville; Joseph S. Blum, M.D., Baltimore; and Andrew C. Mitchell, M.D., Salisbury

Secretary: Charles P. Crimy, M.D., Baltimore

Delegate to the A.A.G.P.: Nathan E. Needle, M.D., Baltimore; J. Roy Guyther, M.D., Mechanicsville (alternate)

Treasurer: Harry L. Knipp, M.D., Baltimore

Executive Secretary: William J. Wiscott, Baltimore

Coming Meetings

PEDIATRIC SECTION, B.C.M.S.

Tuesday, January 13, 1959 6:30 P.M. 1211 Cathedral Street

* * * * *

OPHTHALMOLOGY SECTION, B.C.M.S.

Thursday, January 15, 1959 6:15 P.M. Stafford Hotel

* * * * *

RADIOLOGICAL SECTION

Tuesday, January 20, 1959 5:30 P.M. Johns Hopkins Club

* * * * *

OBSTETRICAL AND GYNECOLOGICAL SOCIETY OF MARYLAND

Thursday, February 5, 1959 6:30 P.M. Stafford Hotel

Residents' Meeting

Dr. Edgar Russell, Chief Resident in Obstetrics and Gynecology, Baltimore City Hospitals
"Improved Technique of Cold-Knife Conization of the Cervix".

Dr. Ronald Teichner, Assistant Resident in Obstetrics and Gynecology, Baltimore City Hospitals

"Use of Experimental Reserpine Derivative—Su-3118—as Anti-hypertensive Agent in Toxemia of Pregnancy".

Dr. Irving Kuperman, Resident in Obstetrics and Gynecology, University Hospital
"Galactose Test for Diabetes During Pregnancy".

Dr. Edward H. Copenhaver, III, Resident in Gynecology, The Johns Hopkins Hospital
"One Thousand Consecutive Vaginal Hysterectomies".

* * * * *

BALTIMORE EAR, NOSE AND THROAT SOCIETY Special Meeting

Tuesday, February 10, 1959 6:15 P.M. University Club, Charles and Madison Streets
Professor Dohlman of London will speak on "Psychology of Vestibular System"

* * * * *

TELEVISION PROGRAMS, B.C.M.S.

Saturday, 5:00-5:30 P.M. WMAR-TV

January 17 "Recent Advances in Surgery," Dr. Otto C. Brantigan

January 31 "Hypertension," Drs. Caroline B. Thomas and Katherine H. Borkovich

February 14 "Tuberculosis," Dr. Meyer Jacobson